

WEST Search History

DATE: Monday, December 02, 2002

Set Name Query
side by side

Hit Count Set Name
result set

DB=USPT,PGPB,JPAB,EPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ

L5	L4 and (plant or seed)	61	L5
L4	L3 and (nucleic acid or gene or dna or cdna)	276	L4
	(farnesyl adj transferase or pernyl adj transferase or geranylgeran\$5		
L3	\$5phosphate synthase or geranylgeran\$5 \$5phosphate synthetase) and (corn or maize or zea mays)	286	L3
	(farnesyl adj transferase or pernyl adj transferase or geranylgeran\$5		
L2	\$5phosphate synthase or geranylgeran\$5 \$5phosphate synthetase) same (corn or maize or zea mays)	5	L2
	(farnesyl adj transferase or pernyl adj transferase or geranylgeran\$5		
L1	\$5phosphate synthase or geranylgeran\$5 \$5phosphate synthetase	731	L1

END OF SEARCH HISTORY

WEST[Generate Collection](#)[Print](#)**Search Results - Record(s) 1 through 5 of 5 returned.**☐ 1. Document ID: US 20020177204 A1

L2: Entry 1 of 5

File: PGPB

Nov 28, 2002

PGPUB-DOCUMENT-NUMBER: 20020177204

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020177204 A1

TITLE: Geranylgeranyl pyrophosphate synthases

PUBLICATION-DATE: November 28, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Cahoon, Rebecca E.	Wilmington	DE	US	
Shen, Jennie Bih-Jien	Wilmington	DE	US	
Williams, Mark E.	Newark	DE	US	

US-CL-CURRENT: [435/193](#); [435/320.1](#), [435/410](#), [435/6](#), [435/69.1](#), [536/23.2](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Draw Desc	Image
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☐ 2. Document ID: US 20020004218 A1

L2: Entry 2 of 5

File: PGPB

Jan 10, 2002

PGPUB-DOCUMENT-NUMBER: 20020004218

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020004218 A1

TITLE: Methods for identifying compounds useful for inhibiting geranylgeranyl diphosphate synthase

PUBLICATION-DATE: January 10, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Rodan, Gideon A.	Bryn Mawr	PA	US	
Reszka, Alfred A.	Glenside	PA	US	

US-CL-CURRENT: [435/21](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Draw Desc	Image
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☐ 3. Document ID: US 6410827 B1

L2: Entry 3 of 5

File: USPT

Jun 25, 2002

US-PAT-NO: 6410827

DOCUMENT-IDENTIFIER: US 6410827 B1

TITLE: Geranylgeranyl pyrophosphate synthases

DATE-ISSUED: June 25, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Cahoon; Rebecca E.	Wilmington	DE		
Shen; Jennie Bih-Jien	Wilmington	DE		
Williams; Mark E.	Newark	DE		

US-CL-CURRENT: 800/278; 435/183, 435/252.3, 435/320.1, 435/410, 435/419, 435/69.1, 530/350, 530/370, 536/23.6, 536/24.1, 536/24.33, 800/295

ABSTRACT:

This invention relates to an isolated nucleic acid fragment encoding a geranylgeranyl pyrophosphate synthase. The invention also relates to the construction of a chimeric gene encoding all or a portion of the geranylgeranyl pyrophosphate synthase, in sense or antisense orientation, wherein expression of the chimeric gene results in production of altered levels of the geranylgeranyl pyrophosphate synthase in a transformed host cell.

14 Claims, 4 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 4

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC	Draw Desc	Image
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☐ 4. Document ID: US 6248937 B1

L2: Entry 4 of 5

File: USPT

Jun 19, 2001

US-PAT-NO: 6248937

DOCUMENT-IDENTIFIER: US 6248937 B1

TITLE: Transcription factor and method for regulation of seed development, quality and stress-tolerance

DATE-ISSUED: June 19, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Finkelstein; Ruth R.	Santa Barbara	CA		
Lynch; Tim	Santa Barbara	CA		
Goodman; Howard M.	Newton Centre	MA		
Wang; Ming-Li	Cambridge	MA		

US-CL-CURRENT: 800/290; 435/320.1, 435/469, 435/470, 435/69.1, 536/23.6, 800/287, 800/294, 800/298, 800/312, 800/314, 800/320, 800/320.3

ABSTRACT:

Identification, cloning and sequencing of the Arabidopsis ABI4 gene involved in seed response to abscisic acid (ABA) that regulates production of seed nutrient reserves and desiccation protectants. A method for regulating seed development, viability, stress-tolerance and nutrient reserves.

13 Claims, 19 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 10

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC	Draw Desc	Image
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☐ 5. Document ID: US 6043072 A

L2: Entry 5 of 5

File: USPT

Mar 28, 2000

US-PAT-NO: 6043072

DOCUMENT-IDENTIFIER: US 6043072 A

TITLE: Nucleic acids encoding Taxus geranylgeranyl diphosphate synthase, and methods of use

DATE-ISSUED: March 28, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Croteau; Rodney B.	Pullman	WA		
Hefner; Jerry L.	Seattle	WA		

US-CL-CURRENT: 435/193; 435/252.3, 435/320.1, 435/419, 530/350, 536/23.2, 536/23.6

ABSTRACT:

A cDNA encoding geranylgeranyl diphosphate synthase from Canadian Yew (*Taxus canadensis*) has been isolated and sequenced, and the corresponding amino acid sequence has been determined. Accordingly, an isolated DNA sequence (SEQ ID NO:1) is provided which codes for the expression of geranylgeranyl diphosphate synthase (SEQ ID NO:2), from Canadian Yew (*Taxus canadensis*). In other aspects, replicable recombinant cloning vehicles are provided which code for geranylgeranyl diphosphate synthase, or for a base sequence sufficiently complementary to at least a portion of geranylgeranyl diphosphate synthase DNA or RNA to enable hybridization therewith. In yet other aspects, modified host cells are provided that have been transformed, transfected, infected and/or injected with a recombinant cloning vehicle and/or DNA sequence encoding geranylgeranyl diphosphate synthase. Thus, systems and methods are provided for the recombinant expression of the aforementioned recombinant geranylgeranyl diphosphate synthase that may be used to facilitate its production, isolation and purification in significant amounts. Recombinant geranylgeranyl diphosphate synthase may be used to obtain expression or enhanced expression of geranylgeranyl diphosphate synthase in plants in order to enhance the production of geranylgeranyl diphosphate, or diterpenes derived therefrom, or may be otherwise employed for the regulation or expression of geranylgeranyl diphosphate synthase, or the production of its products.

13 Claims, 5 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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Terms	Documents
(farnesyl adj transferase or pernyl adj transferase or geranylgeran\$5\$5phosphate synthase or geranylgeran\$5 \$5phosphate synthetase) same (corn or maize or zea mays)	5

Display Format:

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[Change Format](#)[Previous Page](#)[Next Page](#)

WEST[Generate Collection](#)[Print](#)**Search Results - Record(s) 1 through 20 of 61 returned.**☐ 1. Document ID: US 20020177204 A1

L5: Entry 1 of 61

File: PGPB

Nov 28, 2002

PGPUB-DOCUMENT-NUMBER: 20020177204

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020177204 A1

TITLE: Geranylgeranyl pyrophosphate synthases

PUBLICATION-DATE: November 28, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Cahoon, Rebecca E.	Wilmington	DE	US	
Shen, Jennie Bih-Jien	Wilmington	DE	US	
Williams, Mark E.	Newark	DE	US	

US-CL-CURRENT: 435/193; 435/320.1, 435/410, 435/6, 435/69.1, 536/23.2[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#)[KIMC](#) [Draw Desc](#) [Image](#)☐ 2. Document ID: US 20020168745 A1

L5: Entry 2 of 61

File: PGPB

Nov 14, 2002

PGPUB-DOCUMENT-NUMBER: 20020168745

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020168745 A1

TITLE: Transacylases of the paclitaxel biosynthetic pathway

PUBLICATION-DATE: November 14, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Croteau, Rodney B.	Pullman	WA	US	
Walker, Kevin D.	Pullman	WA	US	
Schoendorf, Anne	Pullman	WA	US	
Wildung, Mark R.	Colfax	WA	US	

US-CL-CURRENT: 435/197; 435/252.3, 435/254.2, 435/320.1, 435/325, 435/69.1, 536/23.2, 800/14, 800/278, 800/8[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#)[KIMC](#) [Draw Desc](#) [Image](#)☐ 3. Document ID: US 20020142281 A1

L5: Entry 3 of 61

File: PGPB

Oct 3, 2002

PGPUB-DOCUMENT-NUMBER: 20020142281
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020142281 A1

TITLE: Method for modifying a biosynthetic pathway

PUBLICATION-DATE: October 3, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Broun, Pierre	San Mateo	CA	US	

US-CL-CURRENT: 435/4; 800/278

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 4. Document ID: US 20020138859 A1

L5: Entry 4 of 61

File: PGPB

Sep 26, 2002

PGPUB-DOCUMENT-NUMBER: 20020138859
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020138859 A1

TITLE: Transacylases of the paclitaxel biosynthetic pathway

PUBLICATION-DATE: September 26, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Croteau, Rodney B.	Pullman	WA	US	
Walker, Kevin D.	Pullman	WA	US	
Schoendorf, Anne N.M.N.	Pullman	WA	US	
Wildung, Mark R.	Colfax	WA	US	

US-CL-CURRENT: 800/8; 435/197, 435/252.3, 435/254.2, 435/320.1, 435/325, 435/69.1, 530/388.26, 536/23.2, 800/14, 800/278

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 5. Document ID: US 20020106772 A1

L5: Entry 5 of 61

File: PGPB

Aug 8, 2002

PGPUB-DOCUMENT-NUMBER: 20020106772
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020106772 A1

TITLE: Geranyl diphosphate synthase large subunit, and methods of use

PUBLICATION-DATE: August 8, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Croteau, Rodney B.	Pullman	WA	US	
Burke, Charles C.	Moscow	ID	US	

US-CL-CURRENT: 435/196; 536/23.2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 6. Document ID: US 20020092039 A1

L5: Entry 6 of 61

File: PGPB

Jul 11, 2002

PGPUB-DOCUMENT-NUMBER: 20020092039
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020092039 A1

TITLE: Methods for producing carotenoid compounds and specialty oils in plant seeds

PUBLICATION-DATE: July 11, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Shewmaker, Christine K.	Woodland	CA	US	

US-CL-CURRENT: 800/282; 800/306

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC	Draw Desc	Image
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☐ 7. Document ID: US 20020064820 A1

L5: Entry 7 of 61

File: PGPB

May 30, 2002

PGPUB-DOCUMENT-NUMBER: 20020064820
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020064820 A1

TITLE: Apo-A-I regulation of T-cell signaling

PUBLICATION-DATE: May 30, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Dayer, Jean-Michel	Geneva	CA	CH	
Burger, Danielle	Carouge	CA	CH	
Kohnno, Tadahiko	Thousand Oaks		US	
Edwards, Carl K. III	Thousand Oaks		US	

US-CL-CURRENT: 435/69.1; 424/145.1, 435/320.1, 435/326, 530/388.23, 536/23.53

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC	Draw Desc	Image
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☐ 8. Document ID: US 20020044941 A1

L5: Entry 8 of 61

File: PGPB

Apr 18, 2002

PGPUB-DOCUMENT-NUMBER: 20020044941
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020044941 A1

TITLE: Nucleic acids, proteins and antibodies

PUBLICATION-DATE: April 18, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Rosen, Craig A.	Laytonsville	MD	US	
Ruben, Steven M.	Olney	MD	US	

US-CL-CURRENT: 424/184.1; 435/183, 435/320.1, 435/325, 435/6, 435/69.1, 435/7.1, 514/44, 536/23.1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 9. Document ID: US 20020040489 A1

L5: Entry 9 of 61

File: PGPB

Apr 4, 2002

PGPUB-DOCUMENT-NUMBER: 20020040489

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020040489 A1

TITLE: Expressed sequences of arabidopsis thaliana

PUBLICATION-DATE: April 4, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Gorlach, Jorn	Durham	NC	US	
An, Yong-Qiang	San Diego	CA	US	
Hamilton, Carol M.	Apex	NC	US	
Price, Jennifer L.	Raleigh	NC	US	
Raines, Tracy M.	Durham	NC	US	
Yu, Yang	Martinsville	NJ	US	
Rameaka, Joshua G.	Durham	NC	US	
Page, Amy	Durham	NC	US	
Mathew, Abraham V.	Cary	NC	US	
Ledford, Brooke L.	Holly Springs	NC	US	
Woessner, Jeffrey P.	Hillsborough	NC	US	
Haas, William David	Durham	NC	US	
Garcia, Carlos A.	Carrboro	NC	US	
Kricker, Maja	Pittsboro	NC	US	
Slater, Ted	Apex	NC	US	
Davis, Keith R.	Durham	NC	US	
Allen, Keith	Cary	NC	US	
Hoffman, Neil	Chapel Hill	NC	US	
Hurban, Patrick	Raleigh	NC	US	

US-CL-CURRENT: 800/288; 435/4, 536/23.2, 536/23.6

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 10. Document ID: US 20010051359 A1

L5: Entry 10 of 61

File: PGPB

Dec 13, 2001

PGPUB-DOCUMENT-NUMBER: 20010051359

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010051359 A1

TITLE: GERANYL DIPHOSPHATE SYNTHASE GENES

PUBLICATION-DATE: December 13, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
OHTO, CHIKARA	SENDAI-SHI	CA	JP	
NARITA, KEISHI	SENDAI-SHI		JP	
NISHINO, TOKUZO	SENDAI-SHI		JP	
OHNUMA, SHIN-ICHI	LA JOLLA		US	

US-CL-CURRENT: [435/69.1](#); [435/193](#), [435/252.3](#), [435/320.1](#), [435/41](#), [536/23.2](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 11. Document ID: US 20010044938 A1

L5: Entry 11 of 61

File: PGPB

Nov 22, 2001

PGPUB-DOCUMENT-NUMBER: 20010044938

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010044938 A1

TITLE: STRESS TOLERANCE AND DELAYED SENESCENCE IN PLANTS

PUBLICATION-DATE: November 22, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
MCCOURT, PETER	ONTARIO	NY	CA	
GHASSEMIAN, MAJID	ONTARIO		CA	
CUTLER, SEAN	NIAGARA FALLS		US	
BONETTA, DARIO	ONTARIO		CA	

US-CL-CURRENT: [800/278](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 12. Document ID: US 6429356 B1

L5: Entry 12 of 61

File: USPT

Aug 6, 2002

US-PAT-NO: 6429356

DOCUMENT-IDENTIFIER: US 6429356 B1

TITLE: Methods for producing carotenoid compounds, and specialty oils in plant seeds

DATE-ISSUED: August 6, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Shewmaker; Christine K.	Woodland	CA		

US-CL-CURRENT: [800/278](#); [435/410](#), [435/418](#), [435/419](#), [435/468](#), [435/69.1](#), [800/282](#), [800/283](#), [800/284](#), [800/287](#), [800/288](#), [800/290](#), [800/295](#), [800/298](#), [800/314](#), [800/317](#), [800/317.4](#)

ABSTRACT:

Methods are provided for producing plants and seeds having altered carotenoid, fatty acid and tocopherol compositions. The methods find particular use in increasing the carotenoid levels in oilseed plants and in providing desirable high oleic acid seed oils.

131 Claims, 25 Drawing figures

Exemplary Claim Number: 1
Number of Drawing Sheets: 22

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 13. Document ID: US 6423519 B1

L5: Entry 13 of 61

File: USPT

Jul 23, 2002

US-PAT-NO: 6423519
DOCUMENT-IDENTIFIER: US 6423519 B1

TITLE: Compositions and methods for inhibiting fungal growth

DATE-ISSUED: July 23, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bergnes; Gustave	Belmont	MA		
Berlin; Vivian	Dunstable	MA		
Come; Jon	Cambridge	MA		
Kluge; Arthur	Lincoln	MA		
Murthi; Krishna	Waltham	MA		
Pal; Kollol	Needham	MA		

US-CL-CURRENT: 435/193; 435/259, 514/19

ABSTRACT:

The present invention relates to compositions and methods for inhibiting fungal growth. In particular, the present invention relates to methods for use as anti-fungal agents of inhibitors, and compositions thereof, of fungal GGPTase. The inhibitors of fungal GGPTase may be peptides, peptidomimetics, or non-peptides.

39 Claims, 59 Drawing figures
Exemplary Claim Number: 39
Number of Drawing Sheets: 59

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 14. Document ID: US 6410827 B1

L5: Entry 14 of 61

File: USPT

Jun 25, 2002

US-PAT-NO: 6410827
DOCUMENT-IDENTIFIER: US 6410827 B1

TITLE: Geranylgeranyl pyrophosphate synthases

DATE-ISSUED: June 25, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Cahoon; Rebecca E.	Wilmington	DE		
Shen; Jennie Bih-Jien	Wilmington	DE		
Williams; Mark E.	Newark	DE		

US-CL-CURRENT: 800/278; 435/183, 435/252.3, 435/320.1, 435/410, 435/419, 435/69.1, 530/350, 530/370, 536/23.6, 536/24.1, 536/24.33, 800/295

ABSTRACT:

This invention relates to an isolated nucleic acid fragment encoding a geranylgeranyl pyrophosphate synthase. The invention also relates to the construction of a chimeric gene encoding all or a portion of the geranylgeranyl pyrophosphate synthase, in sense or antisense orientation, wherein expression of the chimeric gene results in production of altered levels of the geranylgeranyl pyrophosphate synthase in a transformed host cell.

14 Claims, 4 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 4

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 15. Document ID: US 6395525 B2

L5: Entry 15 of 61

File: USPT

May 28, 2002

US-PAT-NO: 6395525

DOCUMENT-IDENTIFIER: US 6395525 B2

TITLE: Geranyl diphosphate synthase genes

DATE-ISSUED: May 28, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ohto; Chikara	Sendai			JP
Narita; Keishi	Sendai			JP
Nishino; Tokuzo	Sendai			JP
Ohnuma; Shin-ichi	La Jolla	CA		

US-CL-CURRENT: 435/193; 435/252.3, 435/320.1, 435/41, 435/832, 536/23.2

ABSTRACT:

An isolated recombinant protein comprising the amino acid sequence shown in SEQ ID No: 1 is disclosed. A preferred embodiment of the invention is a recombinant protein having the amino acid sequence shown in SEQ ID NO: 1 but having a deletion, substitution or addition of at least one amino acid, excluding the amino acid at position 82, and which has geranyl diphosphate synthase activity. Also disclosed is the gene encoding the recombinant protein.

12 Claims, 4 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 4

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 16. Document ID: US 6372744 B1

L5: Entry 16 of 61

File: USPT

Apr 16, 2002

US-PAT-NO: 6372744

DOCUMENT-IDENTIFIER: US 6372744 B1

TITLE: .beta.-sheet mimetics and methods relating to the use thereof

DATE-ISSUED: April 16, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Qabar; Maher N.	Redmond	WA		
McMillan; Michael K.	Bellevue	WA		
Kahn; Michael S.	Kirkland	WA		
Tulinsky; John E.	Seattle	WA		
Ogbu; Cyprian O.	Bellevue	WA		
Mathew; Jessymol	Bellevue	WA		

US-CL-CURRENT: 514/248; 514/384, 530/323, 530/332, 548/263.4

ABSTRACT:

.beta.-sheet mimetics and methods relating to the same are disclosed. The .beta.-sheet mimetics have utility as protease and kinase inhibitors, as well as inhibitors of transcription factors and protein-protein binding interactions. Methods of the invention include administration of a .beta.-sheet mimetic, or use of the same for the manufacture of a medicament for treatment of a variety of conditions associated with the targeted protease, kinase, transcription factor and/or protein-protein binding interaction.

73 Claims, 7 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 6

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw. Desc	Image
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☐ 17. Document ID: US 6303330 B1

L5: Entry 17 of 61

File: USPT

Oct 16, 2001

US-PAT-NO: 6303330

DOCUMENT-IDENTIFIER: US 6303330 B1

TITLE: Geranyl diphosphate synthase large subunit, and methods of use

DATE-ISSUED: October 16, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Croteau; Rodney B.	Pullman	WA		
Burke; Charles C.	Moscow	ID		
Wildung; Mark R.	Colfax	WA		

US-CL-CURRENT: 435/69.1; 435/252.3, 435/320.1, 435/325, 435/419, 536/23.6

ABSTRACT:

A cDNA encoding geranyl diphosphate synthase large subunit from peppermint has been isolated and sequenced, and the corresponding amino acid sequence has been determined. Replicable recombinant cloning vehicles are provided which code for geranyl diphosphate synthase large subunit). In another aspect, modified host cells are provided that have been transformed, transfected, infected and/or injected with a recombinant cloning vehicle and/or DNA sequence encoding geranyl diphosphate synthase large subunit. In yet another aspect, the present invention provides isolated, recombinant geranyl diphosphate synthase protein comprising an isolated, recombinant geranyl diphosphate synthase large subunit protein and an isolated, recombinant geranyl diphosphate synthase small subunit protein. Thus, systems and methods are provided for the recombinant expression of geranyl diphosphate synthase.

24 Claims, 2 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw. Desc	Image
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☐ 18. Document ID: US 6302838 B1

L5: Entry 18 of 61

File: USPT

Oct 16, 2001

US-PAT-NO: 6302838

DOCUMENT-IDENTIFIER: US 6302838 B1

TITLE: Cancer treatment with epothilones

DATE-ISSUED: October 16, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
O'Reilly; Terence	Basel			CH
Wartmann; Markus	Riehen			CH
Litchman; Manuel	Teaneck	NJ		
Cohen; Pamela	Tenafly	NJ		

US-CL-CURRENT: 514/365

ABSTRACT:

The invention relates to the treatment of a proliferative disease, especially according to certain treatment regimens, with an epothilone, especially with epothilone A and more preferably epothilone B; as well as to the treatment of certain cancers with such an epothilone.

24 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 19. Document ID: US 6291745 B1

L5: Entry 19 of 61

File: USPT

Sep 18, 2001

US-PAT-NO: 6291745

DOCUMENT-IDENTIFIER: US 6291745 B1

TITLE: Limonene and other downstream metabolites of geranyl pyrophosphate for insect control in plants

DATE-ISSUED: September 18, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Meyer; Terry EuClaire	Urbandale	IA		
Yalpani; Nasser	Johnston	IA		

US-CL-CURRENT: 800/302, 435/418, 435/419, 435/468, 435/69.1, 536/23.1, 536/23.2, 536/23.6, 536/24.1, 536/24.5, 800/260, 800/265, 800/278, 800/279, 800/286, 800/287, 800/295, 800/298, 800/320, 800/320.1, 800/320.2, 800/320.3

ABSTRACT:

Methods for manipulating metabolic pathways in plants, particularly those pathways involved in the biosynthesis of monoterpenes are provided. Methods are directed at transforming plants with one or more nucleotide sequences encoding the enzyme GPP synthase, and the monoterpene synthases limonene-, carveol and S-linolool synthase. Methods for creating or enhancing resistance to insects in plants by transforming plants with GPP- and/or monoterpene synthases, to generate plants producing monoterpenes in amounts effective for resistance to insects are

also provided.

35 Claims, 15 Drawing figures
Exemplary Claim Number: 8,9,10
Number of Drawing Sheets: 13

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 20. Document ID: US 6287835 B1

L5: Entry 20 of 61

File: USPT

Sep 11, 2001

US-PAT-NO: 6287835
DOCUMENT-IDENTIFIER: US 6287835 B1

TITLE: Transacylases of the paclitaxel biosynthetic pathway

DATE-ISSUED: September 11, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Croteau; Rodney B.	Pullman	WA		
Walker; Kevin D.	Pullman	WA		
Schoendorf; Anne	Pullman	WA		
Wildung; Mark R.	Colfax	WA		

US-CL-CURRENT: 435/193; 435/15, 435/252.3, 435/254.11, 435/320.1, 435/325, 435/419, 435/6,
536/23.1, 536/23.2, 800/295

ABSTRACT:

Transacylase enzymes and the use of such enzymes to produce Taxol.TM., related taxoids, as well as intermediates in the Taxol.TM. biosynthetic pathway are disclosed. Also disclosed are nucleic acid sequences encoding the transacylase enzymes.

27 Claims, 35 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 33

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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61

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L5: Entry 21 of 61

File: USPT

Jul 24, 2001

US-PAT-NO: 6265186

DOCUMENT-IDENTIFIER: US 6265186 B1

TITLE: Yeast cells comprising at least two copies of a desired gene integrated into the chromosomal genome at more than one non-ribosomal RNA encoding domain, particularly with *Kluyveromyces*

DATE-ISSUED: July 24, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Swinkels; Bart Willem	Delft			NL
Van Ooijen; Albert Johannes Joseph	Voorburg			NL
Noordermeer-Van Der Haak; Adriana Cornelia Maria	Wateringen			NL

US-CL-CURRENT: [435/69.1](#); [435/254.2](#), [435/483](#)

ABSTRACT:

The present invention provides for a yeast cell comprising at least two copies of a desired gene integrated into its chromosomal genome, wherein said genome comprises at least two DNA domains suitable for integration of one or more copies of said desired gene, which domains share substantial sequence homology and are non-ribosomal RNA encoding DNA domains, and wherein at least two of said substantially homologous non-ribosomal RNA encoding DNA domains have at least one copy of the said desired gene integrated. The invention also provides methods for making yeast cells according to the invention, as well as the use thereof for making a protein, a peptide or a metabolite.

45 Claims, 11 Drawing figures

Exemplary Claim Number: 18

Number of Drawing Sheets: 11

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWOC	Draw. Desc	Image
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☐ **22. Document ID: US 6248937 B1**

L5: Entry 22 of 61

File: USPT

Jun 19, 2001

US-PAT-NO: 6248937

DOCUMENT-IDENTIFIER: US 6248937 B1

TITLE: Transcription factor and method for regulation of seed development, quality and stress-tolerance

DATE-ISSUED: June 19, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Finkelstein; Ruth R.	Santa Barbara	CA		
Lynch; Tim	Santa Barbara	CA		
Goodman; Howard M.	Newton Centre	MA		
Wang; Ming-Li	Cambridge	MA		

US-CL-CURRENT: 800/290; 435/320.1, 435/469, 435/470, 435/69.1, 536/23.6, 800/287, 800/294,
800/298, 800/312, 800/314, 800/320, 800/320.3

ABSTRACT:

Identification, cloning and sequencing of the Arabidopsis ABI4 gene involved in seed response to abscisic acid (ABA) that regulates production of seed nutrient reserves and desiccation protectants. A method for regulating seed development, viability, stress-tolerance and nutrient reserves.

13 Claims, 19 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 10

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC	Draw Desc	Image
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☐ 23. Document ID: US 6245764 B1

L5: Entry 23 of 61

File: USPT

Jun 12, 2001

US-PAT-NO: 6245764
DOCUMENT-IDENTIFIER: US 6245764 B1

TITLE: .beta.-sheet mimetics and use thereof as inhibitors of biologically active peptides or proteins

DATE-ISSUED: June 12, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kahn; Michael	Kirkland	WA		
Ogbu; Cyprian O.	Bellevue	WA		
Eguchi; Masakatsu	Bellevue	WA		
Kim; Hwa-Ok	Redmond	WA		
Boatman, Jr.; Patrick Douglas	Issaquah	WA		

US-CL-CURRENT: 514/248; 514/19, 514/221, 514/405

ABSTRACT:

There are disclosed .beta.-sheet mimetics and methods relating to the same for imparting or stabilizing the .beta.-sheet structure of a peptide, protein or molecule. In one aspect, .beta.-sheet mimetics are disclosed having utility as protease inhibitors in general and, more specifically, as serine protease inhibitors such as thrombin, elastase and Factor X inhibitors. In one embodiment, the .beta.-sheet mimetic is a thrombin inhibitor.

22 Claims, 5 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 4

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC	Draw Desc	Image
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☐ 24. Document ID: US 6232530 B1

L5: Entry 24 of 61

File: USPT

May 15, 2001

US-PAT-NO: 6232530

DOCUMENT-IDENTIFIER: US 6232530 B1

TITLE: Marigold DNA encoding beta-cyclase

DATE-ISSUED: May 15, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
DellaPenna; Dean	Reno	NV		
Cunningham, Jr.; Francis X.	Chevy Chase	MD		

US-CL-CURRENT: 800/282; 536/23.2, 536/23.6

ABSTRACT:

The present invention describes the gene encoding beta-cyclase from marigolds. In particular, the present invention provides the DNA sequence for the gene encoding marigold beta-cyclase as well as vectors containing the same and bacteria and plants transformed with the vectors.

20 Claims, 10 Drawing figures

Exemplary Claim Number: 4

Number of Drawing Sheets: 6

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 25. Document ID: US 6207409 B1

L5: Entry 25 of 61

File: USPT

Mar 27, 2001

US-PAT-NO: 6207409

DOCUMENT-IDENTIFIER: US 6207409 B1

TITLE: Fermentative carotenoid production

DATE-ISSUED: March 27, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hohmann; Hans-Peter	Freiburg			DE
Pasamontes; Luis	Trimbach			CH
Tessier; Michel	Mulhouse			FR
van Loon; Adolphus	Rheinfelden			CH

US-CL-CURRENT: 435/67; 435/132, 435/147, 435/148, 435/166, 435/183, 435/252.3, 435/252.33, 536/23.2, 536/23.7

ABSTRACT:

Novel proteins of Flavobacterium sp. R1534 and the DNA sequences which encode these proteins are disclosed which provide an improved biosynthetic pathway from farnesyl pyrophosphate and isopentyl pyrophosphate to various carotenoid precursors and carotenoids, especially .beta.-carotene, lycopene, zeaxanthin and cantaxanthin.

24 Claims, 93 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 92

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 26. Document ID: US 6194185 B1

L5: Entry 26 of 61

File: USPT

Feb 27, 2001

US-PAT-NO: 6194185

DOCUMENT-IDENTIFIER: US 6194185 B1

TITLE: Recombinant materials and methods for production of limonene hydroxylases

DATE-ISSUED: February 27, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Croteau; Rodney Bruce	Pullman	WA		
Lupien; Shari Lee	Colfax	WA		
Karp; Frank	Moscow	ID		

US-CL-CURRENT: 435/189; 435/252.3, 435/320.1, 435/410, 435/468, 435/476, 536/23.2

ABSTRACT:

cDNA encoding (-)-limonene-6-hydroxylase from spearmint and (-)-limonene-3-hydroxylase from peppermint have been isolated and sequenced, and the corresponding amino acid sequences have been determined. Accordingly, isolated DNA sequences are provided which code for the expression of (-)-limonene-6-hydroxylase from spearmint (SEQ ID No:1, from *Mentha spicata*) and (-)-limonene-3-hydroxylase from peppermint (SEQ ID No:3 and SEQ ID No:5, from *Mentha piperita*). In other aspects, replicable recombinant cloning vehicles are provided which code for limonene hydroxylase or for a base sequence sufficiently complementary to at least a portion of the limonene hydroxylase DNA or RNA to enable hybridization therewith (e.g., antisense limonene hydroxylase RNA or fragments of complementary limonene hydroxylase DNA which are useful as polymerase chain reaction primers or as probes for limonene hydroxylase or related genes). In yet other aspects, modified host cells are provided that have been transformed, transfected, infected and/or injected with a recombinant cloning vehicle and/or DNA sequence encoding limonene hydroxylase. Thus, systems and methods are provided for the recombinant expression of limonene hydroxylase that may be used to facilitate the production, isolation and purification of significant quantities of recombinant limonene hydroxylase (or of the primary enzyme products, trans-carveol or trans-isopiperitenol, respectively) for subsequent use, to obtain expression or enhanced expression of limonene hydroxylase in plants to attain enhanced production of trans-carveol or trans-isopiperitenol as a predator or pathogen defense mechanism, or may be otherwise employed for the regulation or expression of limonene hydroxylase or the production of trans-carveol or trans-isopiperitenol.

16 Claims, 4 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 4

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 27. Document ID: US 6117896 A

L5: Entry 27 of 61

File: USPT

Sep 12, 2000

US-PAT-NO: 6117896

DOCUMENT-IDENTIFIER: US 6117896 A

TITLE: Methods for regulating transcription factors

DATE-ISSUED: September 12, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Qabar; Maher N.	Redmond	WA		
McMillan; Michael K.	Bellevue	WA		
Kahn; Michael S.	Kirkland	WA		
Tulinsky; John E.	Seattle	WA		
Ogbu; Cyprian O.	Bellevue	WA		
Mathew; Jessymol	Bellevue	WA		

US-CL-CURRENT: 514/384; 514/248, 530/323, 530/332, 548/263.4

ABSTRACT:

.beta.-sheet mimetics and methods relating to the same are disclosed. The .beta.-sheet mimetics have utility as protease and kinase inhibitors, as well as inhibitors of transcription factors and protein-protein binding interactions. Methods of the invention include administration of a .beta.-sheet mimetic, or use of the same for the manufacture of a medicament for treatment of a variety of conditions associated with the targeted protease, kinase, transcription factor and/or protein-protein binding interaction.

34 Claims, 7 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 6

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 28. Document ID: US 6083731 A

L5: Entry 28 of 61

File: USPT

Jul 4, 2000

US-PAT-NO: 6083731

DOCUMENT-IDENTIFIER: US 6083731 A

TITLE: Recombinant materials and methods for the production of limonene hydroxylases

DATE-ISSUED: July 4, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Croteau; Rodney Bruce	Pullman	WA		
Lupien; Shari Lee	Colfax	WA		
Karp; Frank	Moscow	ID		

US-CL-CURRENT: 435/189; 435/252.3, 435/320.1, 536/23.2

ABSTRACT:

cDNA encoding (-)-limonene-6-hydroxylase from spearmint and (-)-limonene-3-hydroxylase from peppermint have been isolated and sequenced, and the corresponding amino acid sequences have been determined. Accordingly, isolated DNA sequences are provided which code for the expression of (-)-limonene-6-hydroxylase from spearmint (SEQ ID No:1, from *Mentha spicata*) and (-)-limonene-3-hydroxylase from peppermint (SEQ ID No:8, from *Mentha piperita*). In other aspects, replicable recombinant cloning vehicles are provided which code for limonene hydroxylase or for a base sequence sufficiently complementary to at least a portion of the limonene hydroxylase DNA or RNA to enable hybridization therewith (e.g., antisense limonene hydroxylase RNA or fragments of complementary limonene hydroxylase DNA which are useful as polymerase chain reaction primers or as probes for limonene hydroxylase or related genes). In yet other aspects, modified host cells are provided that have been transformed, transfected, infected and/or injected with a recombinant cloning vehicle and/or DNA sequence encoding limonene hydroxylase. Thus, systems and methods are provided for the recombinant expression of limonene hydroxylase that may be used to facilitate the production, isolation and purification of significant quantities of recombinant limonene hydroxylase (or of the primary enzyme products, trans-carveol or trans-isopiperitenol, respectively) for subsequent use, to obtain expression or enhanced expression of limonene hydroxylase in plants to attain enhanced production of trans-carveol or trans-isopiperitenol as a predator or pathogen defense

mechanism, or may be otherwise employed for the regulation or expression of limonene hydroxylase or the production of trans-carveol or trans-isopiperitenol.

14 Claims, 11 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 11

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	RWC	Draw Desc	Image
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☐ 29. Document ID: US 6054636 A

L5: Entry 29 of 61

File: USPT

Apr 25, 2000

US-PAT-NO: 6054636
DOCUMENT-IDENTIFIER: US 6054636 A

TITLE: Isoflavone biosynthetic enzymes

DATE-ISSUED: April 25, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Fader; Gary Michael	Landenberg	PA		

US-CL-CURRENT: 800/278; 435/320.1, 435/419, 435/468, 435/69.1, 536/23.6, 800/286, 800/298

ABSTRACT:

This invention relates to an isolated nucleic acid fragment encoding soybean enzymes that catalyze steps in biosynthesis of isoflavones, the enzyme a member selected from the group consisting of chalcone isomerase, isoflavone reductase and vestitone reductase. The invention also relates to the construction of chimeric genes encoding all or a substantial portion of the enzymes, in sense or antisense orientation, wherein expression of the chimeric gene results in production of altered levels of the enzyme in a transformed host cell.

5 Claims, 4 Drawing figures
Exemplary Claim Number: 1,2,3,5
Number of Drawing Sheets: 4

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	RWC	Draw Desc	Image
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☐ 30. Document ID: US 6043072 A

L5: Entry 30 of 61

File: USPT

Mar 28, 2000

US-PAT-NO: 6043072
DOCUMENT-IDENTIFIER: US 6043072 A

TITLE: Nucleic acids encoding Taxus geranylgeranyl diphosphate synthase, and methods of use

DATE-ISSUED: March 28, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Croteau; Rodney B.	Pullman	WA		
Hefner; Jerry L.	Seattle	WA		

US-CL-CURRENT: 435/193; 435/252.3, 435/320.1, 435/419, 530/350, 536/23.2, 536/23.6

ABSTRACT:

A cDNA encoding geranylgeranyl diphosphate synthase from Canadian Yew (*Taxus canadensis*) has been isolated and sequenced, and the corresponding amino acid sequence has been determined. Accordingly, an isolated DNA sequence (SEQ ID NO:1) is provided which codes for the expression of geranylgeranyl diphosphate synthase (SEQ ID NO:2), from Canadian Yew (*Taxus canadensis*). In other aspects, replicable recombinant cloning vehicles are provided which code for geranylgeranyl diphosphate synthase, or for a base sequence sufficiently complementary to at least a portion of geranylgeranyl diphosphate synthase DNA or RNA to enable hybridization therewith. In yet other aspects, modified host cells are provided that have been transformed, transfected, infected and/or injected with a recombinant cloning vehicle and/or DNA sequence encoding geranylgeranyl diphosphate synthase. Thus, systems and methods are provided for the recombinant expression of the aforementioned recombinant geranylgeranyl diphosphate synthase that may be used to facilitate its production, isolation and purification in significant amounts. Recombinant geranylgeranyl diphosphate synthase may be used to obtain expression or enhanced expression of geranylgeranyl diphosphate synthase in plants in order to enhance the production of geranylgeranyl diphosphate, or diterpenes derived therefrom, or may be otherwise employed for the regulation or expression of geranylgeranyl diphosphate synthase, or the production of its products.

13 Claims, 5 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 31. Document ID: US 6017956 A

L5: Entry 31 of 61

File: USPT

Jan 25, 2000

US-PAT-NO: 6017956
DOCUMENT-IDENTIFIER: US 6017956 A

TITLE: N,N-disubstituted amic acid derivatives

DATE-ISSUED: January 25, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Iwasawa; Yoshikazu	Tsukuba			JP
Aoyama; Tetsuya	Tsukuba			JP
Kawakami; Kumiko	Tsukuba			JP
Arai; Sachie	Tsukuba			JP
Satoh; Toshihiko	Tsukuba			JP
Monden; Yoshiaki	Tsukuba			JP

US-CL-CURRENT: 514/510, 514/350, 514/355, 514/364, 514/371, 514/444, 514/465, 514/471,
514/533, 514/539, 514/563, 514/570, 544/322, 546/291, 546/309, 548/131, 548/195, 549/435,
549/487, 549/58, 560/42, 562/449

ABSTRACT:

The present invention relates to a compound of the formula (I): ##STR1## wherein Ar.sup.1, Ar.sup.2, Ar.sup.3 and Ar.sup.4 represent an aryl group or a heteroaromatic ring group; A represents a hydrocarbon group which may be substituted; X and Y represent an oxygen atom, a sulfur atom, a carbonyl group or a group of the formula --CHR.sup.a -- (wherein R.sup.a is a hydrogen atom or a lower alkyl group) or --NR.sup.b -- (wherein R.sup.b is a hydrogen atom or a lower alkyl group), or X and Y together represent a vinylene group or an ethynylene group; R.sup.1, R.sup.2, R.sup.3, R.sup.8 and R.sup.9 represent a hydrogen atom, a halogen atom, a hydroxyl group, a lower alkyl group or a lower alkoxy group; R.sup.4 and R.sup.5 represent a hydrogen atom, a halogen atom, a hydroxyl group, an amino group, a nitro group, a cyano group, a carboxyl group, a lower alkoxycarbonyl group, a carbamoyl group, a lower alkylcarbamoyl group, a lower alkyl group, a lower hydroxyalkyl group, a lower fluoroalkyl group or a lower alkoxy group; R.sup.6 is a lower alkyl group; and R.sup.7 is a hydrogen atom or a lower alkyl group, provided that when one of X and Y is an oxygen atom, a sulfur atom or a group of the formula --NR.sup.b --, the other is a carbonyl group or a group of the formula --CHR.sup.a --, its pharmaceutically acceptable salt or ester, and an antitumor agent containing it as an active ingredient.

14 Claims, 0 Drawing figures
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 32. Document ID: US 5965789 A

L5: Entry 32 of 61

File: USPT

Oct 12, 1999

US-PAT-NO: 5965789
DOCUMENT-IDENTIFIER: US 5965789 A

TITLE: Engineering protein posttranslational modification by PACE/furin in transgenic non-human mammals

DATE-ISSUED: October 12, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lubon; Henryk	Rockville	MD		
Drohan; William N.	Springfield	VA		
Paleyanda; Rekha K.	Gaithersburg	MD		

US-CL-CURRENT: 800/14; 435/69.1, 435/69.6, 800/7

ABSTRACT:

The invention relates to transgenic non-human multicellular organisms that contain polynucleotides for expressing proteins that alter posttranslational modification. In particular, the invention provides multiply-transgenic animals in which a first transgene encodes a first protein, a second transgene encodes a second protein, and expression of the second protein affects the posttranslational modification of the first protein in cells of said organism. Expression in preferred embodiments is in specific cells and the modified protein is secreted into a bodily fluid. The invention provides related methods, proteins and products. An example provides transgenic animals that express human Protein C and the processing protease PACE/furin in mammary glands and secrete both proteins into milk.

27 Claims, 2 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 33. Document ID: US 5935808 A

L5: Entry 33 of 61

File: USPT

Aug 10, 1999

US-PAT-NO: 5935808
DOCUMENT-IDENTIFIER: US 5935808 A

TITLE: Carotenoid-producing bacterial species and process for production of carotenoids using same

DATE-ISSUED: August 10, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hirschberg; Joseph	Jerusalem			IL
Harker; Mark	Jerusalem			IL

US-CL-CURRENT: 435/67; 435/252.1

ABSTRACT:

A novel *Paracoccus* species type strain DSM 11574 which produces and secretes carotenoids such as .beta.-carotene, echinenone, .beta.-cryptoxanthin, canthaxanthin, adonirubin, cis-adonixanthin, adonixanthin, astaxanthin and zeaxanthin in vesicles; carotenoid containing vesicles; and a process for production of carotenoids comprising (a) culturing a bacterial species in a nutrient medium including sources of carbon, nitrogen and inorganic substances; and (b) recovering an individual carotenoid pigment or a mixture of carotenoid pigments from the cells, vesicles and/or medium.

14 Claims, 10 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 7

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 34. Document ID: US 5919786 A

L5: Entry 34 of 61

File: USPT

Jul 6, 1999

US-PAT-NO: 5919786

DOCUMENT-IDENTIFIER: US 5919786 A

TITLE: N,N-disubstituted amic acid derivatives

DATE-ISSUED: July 6, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Iwasawa; Yoshikazu	Tsukuba			JP
Aoyama; Tetsuya	Tsukuba			JP
Kawakami; Kumiko	Tsukuba			JP
Arai; Sachie	Tsukuba			JP
Satoh; Toshihiko	Tsukuba			JP
Monden; Yoshiaki	Tsukuba			JP

US-CL-CURRENT: 514/256; 514/332, 514/350, 514/355, 514/364, 514/365, 514/371, 514/372, 514/374, 514/378, 514/406, 514/427, 514/444, 514/465, 514/471, 514/533, 514/539, 514/570, 544/332, 546/290, 546/309, 548/204, 548/214, 548/235, 548/247, 548/338.1, 548/571, 548/572, 549/435, 549/487, 549/58, 560/21, 562/443, 562/444, 562/449, 562/450

ABSTRACT:

The present invention relates to a compound of the formula (I): ##STR1## wherein Ar.sup.1, Ar.sup.2, Ar.sup.3 and Ar.sup.4 represent an aryl group or a heteroaromatic ring group; A represents a hydrocarbon group which may be substituted; X and Y represent an oxygen atom, a sulfur atom, a carbonyl group or a group of the formula --CHR.sup.a -- (wherein R.sup.a is a hydrogen atom or a lower alkyl group) or --NR.sup.b -- (wherein R.sup.b is a hydrogen atom or a lower alkyl group), or X and Y together represent a vinylene group or an ethynylene group; R.sup.1, R.sup.2, R.sup.3, R.sup.8 and R.sup.9 represent a hydrogen atom, a halogen atom, a hydroxyl group, a lower alkyl group or a lower alkoxy group; R.sup.4 and R.sup.5 represent a hydrogen atom, a halogen atom, a hydroxyl group, an amino group, a nitro group, a cyano group, a carboxyl group, a lower alkoxycarbonyl group, a carbamoyl group, a lower alkylcarbamoyl group, a lower alkyl group, a lower hydroxyalkyl group, a lower fluoroalkyl group or a lower alkoxy group, R.sup.6 is a lower alkyl group, and R.sup.7 is a hydrogen atom or a lower alkyl group, provided that when one of X and Y is an oxygen atom, a sulfur atom or a group of the formula --NR.sup.b --, the other is a carbonyl group or a group of the formula --CHR.sup.a --, its pharmaceutically acceptable salt or ester, and an antitumor agent containing it as an active ingredient.

14 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 35. Document ID: US 5916791 A

L5: Entry 35 of 61

File: USPT

Jun 29, 1999

US-PAT-NO: 5916791

DOCUMENT-IDENTIFIER: US 5916791 A

TITLE: Polynucleotide molecule from Haematococcus pluvialis encoding a polypeptide having a .beta.--C--4--oxygenase activity for biotechnological production of (3S,3S)astaxanthin

DATE-ISSUED: June 29, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hirschberg; Joseph	93714 Jerusalem			IL
Lotan; Tamar	Moshava			IL

US-CL-CURRENT: 435/189; 435/183, 435/252.3, 435/252.33, 435/325, 435/410, 435/423, 536/23.2

ABSTRACT:

The present invention relates, in general, to a biotechnological method for production of (3S,3'S) astaxanthin. In particular, the present invention relates to a peptide having a .beta.-C-4-oxygenase activity; a DNA segment coding for this peptide; a RNA segments coding for this peptide; a recombinant DNA molecule comprising a vector and the DNA segment; a host cell or organism containing the above described recombinant DNA molecule or DNA segment; and to a method of biotechnologically producing (3S,3'S) astaxanthin or a food additive containing (3S,3'S) astaxanthin, using the host.

2 Claims, 11 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 6

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 36. Document ID: US 5880332 A

L5: Entry 36 of 61

File: USPT

Mar 9, 1999

US-PAT-NO: 5880332

DOCUMENT-IDENTIFIER: US 5880332 A

TITLE: DNA constructs related to capsanthin capsorubin synthase, cells and plants derived therefrom

DATE-ISSUED: March 9, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Camara; Bilal	Strasbourg			FR
Kuntz; Marcel	Strasbourg			FR

US-CL-CURRENT: 800/282; 435/320.1, 435/419, 435/468, 536/23.2, 536/23.6, 536/24.5, 800/286, 800/298

ABSTRACT:

A DNA construct comprising a DNA sequence homologous to some or all of a sequence encoding a xanthophyll biosynthetic enzyme or a xanthophyll degradative enzyme. In an embodiment the DNA sequence encodes capsanthin-capsorubin synthase (CCS).

15 Claims, 7 Drawing figures
Exemplary Claim Number: 1,14
Number of Drawing Sheets: 5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 37. Document ID: US 5876964 A

L5: Entry 37 of 61

File: USPT

Mar 2, 1999

US-PAT-NO: 5876964
DOCUMENT-IDENTIFIER: US 5876964 A

TITLE: Geranyl diphosphate synthase from mint

DATE-ISSUED: March 2, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Croteau; Rodney Bruce	Pullman	WA		
Wildung; Mark Raymond	Colfax	WA		
Burke; Charles Cullen	Moscow	ID		
Gershenzon; Jonathan	Jena			DE

US-CL-CURRENT: 435/69.1; 435/252.3, 435/254.11, 435/320.1, 435/325, 435/419, 536/23.6

ABSTRACT:

A cDNA encoding geranyl diphosphate synthase from peppermint has been isolated and sequenced, and the corresponding amino acid sequence has been determined. Accordingly, an isolated DNA sequence (SEQ ID No:1) is provided which codes for the expression of geranyl diphosphate synthase (SEQ ID No:2) from peppermint (*Mentha piperita*). In other aspects, replicable recombinant cloning vehicles are provided which code for geranyl diphosphate synthase or for a base sequence sufficiently complementary to at least a portion of the geranyl diphosphate synthase DNA or RNA to enable hybridization therewith (e.g., antisense geranyl diphosphate synthase RNA or fragments of complementary geranyl diphosphate synthase DNA which are useful as polymerase chain reaction primers or as probes for geranyl diphosphate synthase or related genes). In yet other aspects, modified host cells are provided that have been transformed, transfected, infected and/or injected with a recombinant cloning vehicle and/or DNA sequence encoding geranyl diphosphate synthase. Thus, systems and methods are provided for the recombinant expression of geranyl diphosphate synthase that may be used to facilitate the production, isolation and purification of significant quantities of recombinant geranyl diphosphate synthase for subsequent use, to obtain expression or enhanced expression of geranyl diphosphate synthase in plants in order to enhance the production of monoterpenoids, to produce geranyl diphosphate in cancerous cells as a precursor to monoterpenoids having anti-cancer properties or may be otherwise employed for the regulation or expression of geranyl diphosphate synthase or the production of geranyl diphosphate.

12 Claims, 5 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 38. Document ID: US 5858700 A

L5: Entry 38 of 61

File: USPT

Jan 12, 1999

US-PAT-NO: 5858700

DOCUMENT-IDENTIFIER: US 5858700 A

TITLE: Process for the isolation and purification of lycopene crystals

DATE-ISSUED: January 12, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ausich; Rodney L.	Des Moines	IA		
Sanders; David J.	Des Moines	IA		

US-CL-CURRENT: 435/67; 435/166, 435/822, 435/911, 435/946

ABSTRACT:

A process for isolating and purifying lycopene crystals from a biological lycopene source is disclosed. A lycopene-containing oleoresin is saponified in a composition of propylene glycol and aqueous alkali to form lycopene crystals. Crystallization is achieved without the use of added organic solvents. The crystals are isolated and purified. The substantially pure lycopene crystals so obtained are suitable for human consumption and can be used as a nutritional supplement and as an additive in food.

19 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KMC	Draw Desc	Image
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☐ 39. Document ID: US 5849747 A

L5: Entry 39 of 61

File: USPT

Dec 15, 1998

US-PAT-NO: 5849747

DOCUMENT-IDENTIFIER: US 5849747 A

TITLE: N, n-disubstituted amic acid derivatives

DATE-ISSUED: December 15, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Iwasawa; Yoshikazu	Tsukuba			JP
Aoyama; Tetsuya	Tsukuba			JP
Kawakami; Kumiko	Tsukuba			JP
Arai; Sachie	Tsukuba			JP
Satoh; Toshihiko	Tsukuba			JP
Monden; Yoshiaki	Tsukuba			JP

US-CL-CURRENT: 514/256; 514/350, 514/355, 514/364, 514/371, 514/444, 514/465, 514/471, 514/533, 514/539, 514/563, 514/570, 544/322, 546/291, 546/309, 548/131, 548/195, 549/435, 549/487, 549/58

ABSTRACT:

The present invention relates to a compound of the formula (I): ##STR1## wherein Ar.sup.1, Ar.sup.2, Ar.sup.3 and Ar.sup.4 represent an aryl group or a heteroaromatic ring group; A represents a hydrocarbon group which may be substituted; X and Y represent an oxygen atom, a sulfur atom, a carbonyl group or a group of the formula --CHR.sup.a -- (wherein R.sup.a is a hydrogen atom or a lower alkyl group) or --NR.sup.b -- (wherein R.sup.b is a hydrogen atom or a lower alkyl group), or X and Y together represent a vinylene group or an ethynylene group; R.sup.1, R.sup.2, R.sup.3, R.sup.8 and R.sup.9 represent a hydrogen atom, a halogen atom, a hydroxyl group, a lower alkyl group or a lower alkoxy group; R.sup.4 and R.sup.5 represent a hydrogen atom, a halogen atom, a hydroxyl group, an amino group, a nitro group, a cyano group, a carboxyl group, a lower alkoxycarbonyl group, a carbamoyl group, a lower alkylcarbamoyl

group, a lower alkyl group, a lower hydroxyalkyl group, a lower fluoroalkyl group or a lower alkoxy group; R.sup.6 is a lower alkyl group; and R.sup.7 is a hydrogen atom or a lower alkyl group, provided that when one of X and Y is an oxygen atom, a sulfur atom or a group of the formula --NR.sup.b --, the other is a carbonyl group or a group of the formula --CHR.sup.a --, its pharmaceutically acceptable salt or ester, and an antitumor agent containing it as an active ingredient.

8 Claims, 0 Drawing figures
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 40. Document ID: US 5776675 A

L5: Entry 40 of 61

File: USPT

Jul 7, 1998

US-PAT-NO: 5776675
DOCUMENT-IDENTIFIER: US 5776675 A

TITLE: Identification of compounds modulating protein/cell membrane association

DATE-ISSUED: July 7, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Broad, Peter Michael	Congleton			GB

US-CL-CURRENT: 435/6; 435/254.21, 435/320.1, 435/325, 530/350

ABSTRACT:

A method for identifying compounds which modulate protein/cell membrane association which method comprises contacting a test compound with a cell, having (i) a cell membrane, (ii) a heterologous protein comprising a reporter sequence and a recognition sequence for cell membrane association, (iii) a reporter system which is acted upon by the reporter sequence such that there is a measurable change in cell phenotype upon modulation of protein/cell membrane association by the test compound, and detecting any change in cell phenotype.

15 Claims, 9 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 4

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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L5: Entry 21 of 61

File: USPT

Jul 24, 2001

US-PAT-NO: 6265186

DOCUMENT-IDENTIFIER: US 6265186 B1

TITLE: Yeast cells comprising at least two copies of a desired gene integrated into the chromosomal genome at more than one non-ribosomal RNA encoding domain, particularly with Kluyveromyces

DATE-ISSUED: July 24, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Swinkels; Bart Willem	Delft			NL
Van Ooijen; Albert Johannes Joseph	Voorburg			NL
Noordermeer-Van Der Haak; Adriana Cornelia Maria	Wateringen			NL

US-CL-CURRENT: [435/69.1](#); [435/254.2](#), [435/483](#)

ABSTRACT:

The present invention provides for a yeast cell comprising at least two copies of a desired gene integrated into its chromosomal genome, wherein said genome comprises at least two DNA domains suitable for integration of one or more copies of said desired gene, which domains share substantial sequence homology and are non-ribosomal RNA encoding DNA domains, and wherein at least two of said substantially homologous non-ribosomal RNA encoding DNA domains have at least one copy of the said desired gene integrated. The invention also provides methods for making yeast cells according to the invention, as well as the use thereof for making a protein, a peptide or a metabolite.

45 Claims, 11 Drawing figures

Exemplary Claim Number: 18

Number of Drawing Sheets: 11

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ **22. Document ID: US 6248937 B1**

L5: Entry 22 of 61

File: USPT

Jun 19, 2001

US-PAT-NO: 6248937

DOCUMENT-IDENTIFIER: US 6248937 B1

TITLE: Transcription factor and method for regulation of seed development, quality and stress-tolerance

DATE-ISSUED: June 19, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Finkelstein; Ruth R.	Santa Barbara	CA		
Lynch; Tim	Santa Barbara	CA		
Goodman; Howard M.	Newton Centre	MA		
Wang; Ming-Li	Cambridge	MA		

US-CL-CURRENT: 800/290; 435/320.1, 435/469, 435/470, 435/69.1, 536/23.6, 800/287, 800/294,
800/298, 800/312, 800/314, 800/320, 800/320.3

ABSTRACT:

Identification, cloning and sequencing of the Arabidopsis ABI4 gene involved in seed response to abscisic acid (ABA) that regulates production of seed nutrient reserves and desiccation protectants. A method for regulating seed development, viability, stress-tolerance and nutrient reserves.

13 Claims, 19 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 10

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC	Draw Desc	Image
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☐ 23. Document ID: US 6245764 B1

L5: Entry 23 of 61

File: USPT

Jun 12, 2001

US-PAT-NO: 6245764
DOCUMENT-IDENTIFIER: US 6245764 B1

TITLE: .beta.-sheet mimetics and use thereof as inhibitors of biologically active peptides or proteins

DATE-ISSUED: June 12, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kahn; Michael	Kirkland	WA		
Ogbu; Cyprian O.	Bellevue	WA		
Eguchi; Masakatsu	Bellevue	WA		
Kim; Hwa-Ok	Redmond	WA		
Boatman, Jr.; Patrick Douglas	Issaquah	WA		

US-CL-CURRENT: 514/248; 514/19, 514/221, 514/405

ABSTRACT:

There are disclosed .beta.-sheet mimetics and methods relating to the same for imparting or stabilizing the .beta.-sheet structure of a peptide, protein or molecule. In one aspect, .beta.-sheet mimetics are disclosed having utility as protease inhibitors in general and, more specifically, as serine protease inhibitors such as thrombin, elastase and Factor X inhibitors. In one embodiment, the .beta.-sheet mimetic is a thrombin inhibitor.

22 Claims, 5 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 4

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC	Draw Desc	Image
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☐ 24. Document ID: US 6232530 B1

L5: Entry 24 of 61

File: USPT

May 15, 2001

US-PAT-NO: 6232530

DOCUMENT-IDENTIFIER: US 6232530 B1

TITLE: Marigold DNA encoding beta-cyclase

DATE-ISSUED: May 15, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
DellaPenna; Dean	Reno	NV		
Cunningham, Jr.; Francis X.	Chevy Chase	MD		

US-CL-CURRENT: 800/282; 536/23.2, 536/23.6

ABSTRACT:

The present invention describes the gene encoding beta-cyclase from marigolds. In particular, the present invention provides the DNA sequence for the gene encoding marigold beta-cyclase as well as vectors containing the same and bacteria and plants transformed with the vectors.

20 Claims, 10 Drawing figures

Exemplary Claim Number: 4

Number of Drawing Sheets: 6

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 25. Document ID: US 6207409 B1

L5: Entry 25 of 61

File: USPT

Mar 27, 2001

US-PAT-NO: 6207409

DOCUMENT-IDENTIFIER: US 6207409 B1

TITLE: Fermentative carotenoid production

DATE-ISSUED: March 27, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hohmann; Hans-Peter	Frieburg			DE
Pasamontes; Luis	Trimbach			CH
Tessier; Michel	Mulhouse			FR
van Loon; Adolphus	Rheinfelden			CH

US-CL-CURRENT: 435/67; 435/132, 435/147, 435/148, 435/166, 435/183, 435/252.3, 435/252.33, 536/23.2, 536/23.7

ABSTRACT:

Novel proteins of Flavobacterium sp. R1534 and the DNA sequences which encode these proteins are disclosed which provide an improved biosynthetic pathway from farnesyl pyrophosphate and isopentyl pyrophosphate to various carotenoid precursors and carotenoids, especially .beta.-carotene, lycopene, zeaxanthin and cantaxanthin.

24 Claims, 93 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 92

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 26. Document ID: US 6194185 B1

L5: Entry 26 of 61

File: USPT

Feb 27, 2001

US-PAT-NO: 6194185

DOCUMENT-IDENTIFIER: US 6194185 B1

TITLE: Recombinant materials and methods for production of limonene hydroxylases

DATE-ISSUED: February 27, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Croteau; Rodney Bruce	Pullman	WA		
Lupien; Shari Lee	Colfax	WA		
Karp; Frank	Moscow	ID		

US-CL-CURRENT: 435/189; 435/252.3, 435/320.1, 435/410, 435/468, 435/476, 536/23.2

ABSTRACT:

cDNA encoding (-)-limonene-6-hydroxylase from spearmint and (-)-limonene-3-hydroxylase from peppermint have been isolated and sequenced, and the corresponding amino acid sequences have been determined. Accordingly, isolated DNA sequences are provided which code for the expression of (-)-limonene-6-hydroxylase from spearmint (SEQ ID No:1, from *Mentha spicata*) and (-)-limonene-3-hydroxylase from peppermint (SEQ ID No:3 and SEQ ID No:5, from *Mentha piperita*). In other aspects, replicable recombinant cloning vehicles are provided which code for limonene hydroxylase or for a base sequence sufficiently complementary to at least a portion of the limonene hydroxylase DNA or RNA to enable hybridization therewith (e.g., antisense limonene hydroxylase RNA or fragments of complementary limonene hydroxylase DNA which are useful as polymerase chain reaction primers or as probes for limonene hydroxylase or related genes). In yet other aspects, modified host cells are provided that have been transformed, transfected, infected and/or injected with a recombinant cloning vehicle and/or DNA sequence encoding limonene hydroxylase. Thus, systems and methods are provided for the recombinant expression of limonene hydroxylase that may be used to facilitate the production, isolation and purification of significant quantities of recombinant limonene hydroxylase (or of the primary enzyme products, trans-carveol or trans-isopiperitenol, respectively) for subsequent use, to obtain expression or enhanced expression of limonene hydroxylase in plants to attain enhanced production of trans-carveol or trans-isopiperitenol as a predator or pathogen defense mechanism, or may be otherwise employed for the regulation or expression of limonene hydroxylase or the production of trans-carveol or trans-isopiperitenol.

16 Claims, 4 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 4

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 27. Document ID: US 6117896 A

L5: Entry 27 of 61

File: USPT

Sep 12, 2000

US-PAT-NO: 6117896

DOCUMENT-IDENTIFIER: US 6117896 A

TITLE: Methods for regulating transcription factors

DATE-ISSUED: September 12, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Qabar; Maher N.	Redmond	WA		
McMillan; Michael K.	Bellevue	WA		
Kahn; Michael S.	Kirkland	WA		
Tulinsky; John E.	Seattle	WA		
Ogbu; Cyprian O.	Bellevue	WA		
Mathew; Jessymol	Bellevue	WA		

US-CL-CURRENT: 514/384; 514/248, 530/323, 530/332, 548/263.4

ABSTRACT:

.beta.-sheet mimetics and methods relating to the same are disclosed. The .beta.-sheet mimetics have utility as protease and kinase inhibitors, as well as inhibitors of transcription factors and protein-protein binding interactions. Methods of the invention include administration of a .beta.-sheet mimetic, or use of the same for the manufacture of a medicament for treatment of a variety of conditions associated with the targeted protease, kinase, transcription factor and/or protein-protein binding interaction.

34 Claims, 7 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 6

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 28. Document ID: US 6083731 A

L5: Entry 28 of 61

File: USPT

Jul 4, 2000

US-PAT-NO: 6083731

DOCUMENT-IDENTIFIER: US 6083731 A

TITLE: Recombinant materials and methods for the production of limonene hydroxylases

DATE-ISSUED: July 4, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Croteau; Rodney Bruce	Pullman	WA		
Lupien; Shari Lee	Colfax	WA		
Karp; Frank	Moscow	ID		

US-CL-CURRENT: 435/189; 435/252.3, 435/320.1, 536/23.2

ABSTRACT:

cDNA encoding (-)-limonene-6-hydroxylase from spearmint and (-)-limonene-3-hydroxylase from peppermint have been isolated and sequenced, and the corresponding amino acid sequences have been determined. Accordingly, isolated DNA sequences are provided which code for the expression of (-)-limonene-6-hydroxylase from spearmint (SEQ ID No:1, from *Mentha spicata*) and (-)-limonene-3-hydroxylase from peppermint (SEQ ID No:8, from *Mentha piperita*). In other aspects, replicable recombinant cloning vehicles are provided which code for limonene hydroxylase or for a base sequence sufficiently complementary to at least a portion of the limonene hydroxylase DNA or RNA to enable hybridization therewith (e.g., antisense limonene hydroxylase RNA or fragments of complementary limonene hydroxylase DNA which are useful as polymerase chain reaction primers or as probes for limonene hydroxylase or related genes). In yet other aspects, modified host cells are provided that have been transformed, transfected, infected and/or injected with a recombinant cloning vehicle and/or DNA sequence encoding limonene hydroxylase. Thus, systems and methods are provided for the recombinant expression of limonene hydroxylase that may be used to facilitate the production, isolation and purification of significant quantities of recombinant limonene hydroxylase (or of the primary enzyme products, trans-carveol or trans-isopiperitenol, respectively) for subsequent use, to obtain expression or enhanced expression of limonene hydroxylase in plants to attain enhanced production of trans-carveol or trans-isopiperitenol as a predator or pathogen defense

mechanism, or may be otherwise employed for the regulation or expression of limonene hydroxylase or the production of trans-carveol or trans-isopiperitenol.

14 Claims, 11 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 11

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 29. Document ID: US 6054636 A

L5: Entry 29 of 61

File: USPT

Apr 25, 2000

US-PAT-NO: 6054636
DOCUMENT-IDENTIFIER: US 6054636 A

TITLE: Isoflavone biosynthetic enzymes

DATE-ISSUED: April 25, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Fader; Gary Michael	Landenberg	PA		

US-CL-CURRENT: 800/278; 435/320.1, 435/419, 435/468, 435/69.1, 536/23.6, 800/286, 800/298

ABSTRACT:

This invention relates to an isolated nucleic acid fragment encoding soybean enzymes that catalyze steps in biosynthesis of isoflavones, the enzyme a member selected from the group consisting of chalcone isomerase, isoflavone reductase and vestitone reductase. The invention also relates to the construction of chimeric genes encoding all or a substantial portion of the enzymes, in sense or antisense orientation, wherein expression of the chimeric gene results in production of altered levels of the enzyme in a transformed host cell.

5 Claims, 4 Drawing figures
Exemplary Claim Number: 1,2,3,5
Number of Drawing Sheets: 4

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 30. Document ID: US 6043072 A

L5: Entry 30 of 61

File: USPT

Mar 28, 2000

US-PAT-NO: 6043072
DOCUMENT-IDENTIFIER: US 6043072 A

TITLE: Nucleic acids encoding Taxus geranylgeranyl diphosphate synthase, and methods of use

DATE-ISSUED: March 28, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Croteau; Rodney B.	Pullman	WA		
Hefner; Jerry L.	Seattle	WA		

US-CL-CURRENT: 435/193; 435/252.3, 435/320.1, 435/419, 530/350, 536/23.2, 536/23.6

ABSTRACT:

A cDNA encoding geranylgeranyl diphosphate synthase from Canadian Yew (*Taxus canadensis*) has been isolated and sequenced, and the corresponding amino acid sequence has been determined. Accordingly, an isolated DNA sequence (SEQ ID NO:1) is provided which codes for the expression of geranylgeranyl diphosphate synthase (SEQ ID NO:2), from Canadian Yew (*Taxus canadensis*). In other aspects, replicable recombinant cloning vehicles are provided which code for geranylgeranyl diphosphate synthase, or for a base sequence sufficiently complementary to at least a portion of geranylgeranyl diphosphate synthase DNA or RNA to enable hybridization therewith. In yet other aspects, modified host cells are provided that have been transformed, transfected, infected and/or injected with a recombinant cloning vehicle and/or DNA sequence encoding geranylgeranyl diphosphate synthase. Thus, systems and methods are provided for the recombinant expression of the aforementioned recombinant geranylgeranyl diphosphate synthase that may be used to facilitate its production, isolation and purification in significant amounts. Recombinant geranylgeranyl diphosphate synthase may be used to obtain expression or enhanced expression of geranylgeranyl diphosphate synthase in plants in order to enhance the production of geranylgeranyl diphosphate, or diterpenes derived therefrom, or may be otherwise employed for the regulation or expression of geranylgeranyl diphosphate synthase, or the production of its products.

13 Claims, 5 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC	Draw Desc	Image
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☐ 31. Document ID: US 6017956 A

L5: Entry 31 of 61

File: USPT

Jan 25, 2000

US-PAT-NO: 6017956
DOCUMENT-IDENTIFIER: US 6017956 A

TITLE: N,N-disubstituted amic acid derivatives

DATE-ISSUED: January 25, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Iwasawa; Yoshikazu	Tsukuba			JP
Aoyama; Tetsuya	Tsukuba			JP
Kawakami; Kumiko	Tsukuba			JP
Arai; Sachie	Tsukuba			JP
Satoh; Toshihiko	Tsukuba			JP
Monden; Yoshiaki	Tsukuba			JP

US-CL-CURRENT: 514/510, 514/350, 514/355, 514/364, 514/371, 514/444, 514/465, 514/471,
514/533, 514/539, 514/563, 514/570, 544/322, 546/291, 546/309, 548/131, 548/195, 549/435,
549/487, 549/58, 560/42, 562/449

ABSTRACT:

The present invention relates to a compound of the formula (I): ##STR1## wherein Ar.sup.1, Ar.sup.2, Ar.sup.3 and Ar.sup.4 represent an aryl group or a heteroaromatic ring group; A represents a hydrocarbon group which may be substituted; X and Y represent an oxygen atom, a sulfur atom, a carbonyl group or a group of the formula --CHR.sup.a-- (wherein R.sup.a is a hydrogen atom or a lower alkyl group) or --NR.sup.b-- (wherein R.sup.b is a hydrogen atom or a lower alkyl group), or X and Y together represent a vinylene group or an ethynylene group; R.sup.1, R.sup.2, R.sup.3, R.sup.8 and R.sup.9 represent a hydrogen atom, a halogen atom, a hydroxyl group, a lower alkyl group or a lower alkoxy group; R.sup.4 and R.sup.5 represent a hydrogen atom, a halogen atom, a hydroxyl group, an amino group, a nitro group, a cyano group, a carboxyl group, a lower alkoxycarbonyl group, a carbamoyl group, a lower alkylcarbamoyl group, a lower alkyl group, a lower hydroxyalkyl group, a lower fluoroalkyl group or a lower alkoxy group; R.sup.6 is a lower alkyl group; and R.sup.7 is a hydrogen atom or a lower alkyl group, provided that when one of X and Y is an oxygen atom, a sulfur atom or a group of the formula --NR.sup.b--, the other is a carbonyl group or a group of the formula --CHR.sup.a--, its pharmaceutically acceptable salt or ester, and an antitumor agent containing it as an active ingredient.

14 Claims, 0 Drawing figures
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 32. Document ID: US 5965789 A

L5: Entry 32 of 61

File: USPT

Oct 12, 1999

US-PAT-NO: 5965789
DOCUMENT-IDENTIFIER: US 5965789 A

TITLE: Engineering protein posttranslational modification by PACE/furin in transgenic non-human mammals

DATE-ISSUED: October 12, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lubon; Henryk	Rockville	MD		
Drohan; William N.	Springfield	VA		
Paleyanda; Rekha K.	Gaithersburg	MD		

US-CL-CURRENT: 800/14; 435/69.1, 435/69.6, 800/7

ABSTRACT:

The invention relates to transgenic non-human multicellular organisms that contain polynucleotides for expressing proteins that alter posttranslational modification. In particular, the invention provides multiply-transgenic animals in which a first transgene encodes a first protein, a second transgene encodes a second protein, and expression of the second protein affects the posttranslational modification of the first protein in cells of said organism. Expression in preferred embodiments is in specific cells and the modified protein is secreted into a bodily fluid. The invention provides related methods, proteins and products. An example provides transgenic animals that express human Protein C and the processing protease PACE/furin in mammary glands and secrete both proteins into milk.

27 Claims, 2 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 33. Document ID: US 5935808 A

L5: Entry 33 of 61

File: USPT

Aug 10, 1999

US-PAT-NO: 5935808
DOCUMENT-IDENTIFIER: US 5935808 A

TITLE: Carotenoid-producing bacterial species and process for production of carotenoids using same

DATE-ISSUED: August 10, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hirschberg; Joseph	Jerusalem			IL
Harker; Mark	Jerusalem			IL

US-CL-CURRENT: 435/67; 435/252.1

ABSTRACT:

A novel Paracoccus species type strain DSM 11574 which produces and secretes carotenoids such as .beta.-carotene, echinenone, .beta.-cryptoxanthin, canthaxanthin, adonirubin, cis-adonixanthin, adonixanthin, astaxanthin and zeaxanthin in vesicles; carotenoid containing vesicles; and a process for production of carotenoids comprising (a) culturing a bacterial species in a nutrient medium including sources of carbon, nitrogen and inorganic substances; and (b) recovering an individual carotenoid pigment or a mixture of carotenoid pigments from the cells, vesicles and/or medium.

14 Claims, 10 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 7

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWOC	Draw Desc	Image
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☐ 34. Document ID: US 5919786 A

LS: Entry 34 of 61

File: USPT

Jul 6, 1999

US-PAT-NO: 5919786

DOCUMENT-IDENTIFIER: US 5919786 A

TITLE: N,N-disubstituted amic acid derivatives

DATE-ISSUED: July 6, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Iwasawa; Yoshikazu	Tsukuba			JP
Aoyama; Tetsuya	Tsukuba			JP
Kawakami; Kumiko	Tsukuba			JP
Arai; Sachie	Tsukuba			JP
Satoh; Toshihiko	Tsukuba			JP
Monden; Yoshiaki	Tsukuba			JP

US-CL-CURRENT: 514/256; 514/332, 514/350, 514/355, 514/364, 514/365, 514/371, 514/372, 514/374, 514/378, 514/406, 514/427, 514/444, 514/465, 514/471, 514/533, 514/539, 514/570, 544/332, 546/290, 546/309, 548/204, 548/214, 548/235, 548/247, 548/338.1, 548/571, 548/572, 549/435, 549/487, 549/58, 560/21, 562/443, 562/444, 562/449, 562/450

ABSTRACT:

The present invention relates to a compound of the formula (I): ##STR1## wherein Ar.sup.1, Ar.sup.2, Ar.sup.3 and Ar.sup.4 represent an aryl group or a heteroaromatic ring group; A represents a hydrocarbon group which may be substituted; X and Y represent an oxygen atom, a sulfur atom, a carbonyl group or a group of the formula --CHR.sup.a -- (wherein R.sup.a is a hydrogen atom or a lower alkyl group) or --NR.sup.b -- (wherein R.sup.b is a hydrogen atom or a lower alkyl group), or X and Y together represent a vinylene group or an ethynylene group; R.sup.1, R.sup.2, R.sup.3, R.sup.8 and R.sup.9 represent a hydrogen atom, a halogen atom, a hydroxyl group, a lower alkyl group or a lower alkoxy group; R.sup.4 and R.sup.5 represent a hydrogen atom, a halogen atom, a hydroxyl group, an amino group, a nitro group, a cyano group, a carboxyl group, a lower alkoxycarbonyl group, a carbamoyl group, a lower alkylcarbamoyl group, a lower alkyl group, a lower hydroxyalkyl group, a lower fluoroalkyl group or a lower alkoxy group, R.sup.6 is a lower alkyl group, and R.sup.7 is a hydrogen atom or a lower alkyl group, provided that when one of X and Y is an oxygen atom, a sulfur atom or a group of the formula --NR.sup.b --, the other is a carbonyl group or a group of the formula --CHR.sup.a --, its pharmaceutically acceptable salt or ester, and an antitumor agent containing it as an active ingredient.

14 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 35. Document ID: US 5916791 A

L5: Entry 35 of 61

File: USPT

Jun 29, 1999

US-PAT-NO: 5916791

DOCUMENT-IDENTIFIER: US 5916791 A

TITLE: Polynucleotide molecule from Haematococcus pluvialis encoding a polypeptide having a .beta.--C-4--oxygenase activity for biotechnological production of (3S,3S)astaxanthin

DATE-ISSUED: June 29, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hirschberg; Joseph	93714 Jerusalem			IL
Lotan; Tamar	Moshava			IL

US-CL-CURRENT: 435/189; 435/183, 435/252.3, 435/252.33, 435/325, 435/410, 435/423, 536/23.2

ABSTRACT:

The present invention relates, in general, to a biotechnological method for production of (3S,3'S) astaxanthin. In particular, the present invention relates to a peptide having a .beta.-C-4-oxygenase activity; a DNA segment coding for this peptide; a RNA segments coding for this peptide; a recombinant DNA molecule comprising a vector and the DNA segment; a host cell or organism containing the above described recombinant DNA molecule or DNA segment; and to a method of biotechnologically producing (3S,3'S) astaxanthin or a food additive containing (3S,3'S) astaxanthin, using the host.

2 Claims, 11 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 6

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 36. Document ID: US 5880332 A

L5: Entry 36 of 61

File: USPT

Mar 9, 1999

US-PAT-NO: 5880332

DOCUMENT-IDENTIFIER: US 5880332 A

TITLE: DNA constructs related to capsanthin capsorubin synthase, cells and plants derived therefrom

DATE-ISSUED: March 9, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Camara; Bilal	Strasbourg			FR
Kuntz; Marcel	Strasbourg			FR

US-CL-CURRENT: 800/282; 435/320.1, 435/419, 435/468, 536/23.2, 536/23.6, 536/24.5, 800/286, 800/298

ABSTRACT:

A DNA construct comprising a DNA sequence homologous to some or all of a sequence encoding a xanthophyll biosynthetic enzyme or a xanthophyll degradative enzyme. In an embodiment the DNA sequence encodes capsanthin-capsorubin synthase (CCS).

15 Claims, 7 Drawing figures
Exemplary Claim Number: 1,14
Number of Drawing Sheets: 5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 37. Document ID: US 5876964 A

L5: Entry 37 of 61

File: USPT

Mar 2, 1999

US-PAT-NO: 5876964
DOCUMENT-IDENTIFIER: US 5876964 A

TITLE: Geranyl diphosphate synthase from mint

DATE-ISSUED: March 2, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Croteau; Rodney Bruce	Pullman	WA		
Wildung; Mark Raymond	Colfax	WA		
Burke; Charles Cullen	Moscow	ID		
Gershenzon; Jonathan	Jena			DE

US-CL-CURRENT: 435/69.1; 435/252.3, 435/254.11, 435/320.1, 435/325, 435/419, 536/23.6

ABSTRACT:

A cDNA encoding geranyl diphosphate synthase from peppermint has been isolated and sequenced, and the corresponding amino acid sequence has been determined. Accordingly, an isolated DNA sequence (SEQ ID No:1) is provided which codes for the expression of geranyl diphosphate synthase (SEQ ID No:2) from peppermint (*Mentha piperita*). In other aspects, replicable recombinant cloning vehicles are provided which code for geranyl diphosphate synthase or for a base sequence sufficiently complementary to at least a portion of the geranyl diphosphate synthase DNA or RNA to enable hybridization therewith (e.g., antisense geranyl diphosphate synthase RNA or fragments of complementary geranyl diphosphate synthase DNA which are useful as polymerase chain reaction primers or as probes for geranyl diphosphate synthase or related genes). In yet other aspects, modified host cells are provided that have been transformed, transfected, infected and/or injected with a recombinant cloning vehicle and/or DNA sequence encoding geranyl diphosphate synthase. Thus, systems and methods are provided for the recombinant expression of geranyl diphosphate synthase that may be used to facilitate the production, isolation and purification of significant quantities of recombinant geranyl diphosphate synthase for subsequent use, to obtain expression or enhanced expression of geranyl diphosphate synthase in plants in order to enhance the production of monoterpenoids, to produce geranyl diphosphate in cancerous cells as a precursor to monoterpenoids having anti-cancer properties or may be otherwise employed for the regulation or expression of geranyl diphosphate synthase or the production of geranyl diphosphate.

12 Claims, 5 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 38. Document ID: US 5858700 A

L5: Entry 38 of 61

File: USPT

Jan 12, 1999

US-PAT-NO: 5858700
DOCUMENT-IDENTIFIER: US 5858700 A

TITLE: Process for the isolation and purification of lycopene crystals

DATE-ISSUED: January 12, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ausich; Rodney L.	Des Moines	IA		
Sanders; David J.	Des Moines	IA		

US-CL-CURRENT: 435/67; 435/166, 435/822, 435/911, 435/946

ABSTRACT:

A process for isolating and purifying lycopene crystals from a biological lycopene source is disclosed. A lycopene-containing oleoresin is saponified in a composition of propylene glycol and aqueous alkali to form lycopene crystals. Crystallization is achieved without the use of added organic solvents. The crystals are isolated and purified. The substantially pure lycopene crystals so obtained are suitable for human consumption and can be used as a nutritional supplement and as an additive in food.

19 Claims, 0 Drawing figures
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC	Draw Desc	Image
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☐ 39. Document ID: US 5849747 A

L5: Entry 39 of 61

File: USPT

Dec 15, 1998

US-PAT-NO: 5849747
DOCUMENT-IDENTIFIER: US 5849747 A

TITLE: N, n-disubstituted amic acid derivatives

DATE-ISSUED: December 15, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Iwasawa; Yoshikazu	Tsukuba			JP
Aoyama; Tetsuya	Tsukuba			JP
Kawakami; Kumiko	Tsukuba			JP
Arai; Sachie	Tsukuba			JP
Satoh; Toshihiko	Tsukuba			JP
Monden; Yoshiaki	Tsukuba			JP

US-CL-CURRENT: 514/256; 514/350, 514/355, 514/364, 514/371, 514/444, 514/465, 514/471, 514/533, 514/539, 514/563, 514/570, 544/322, 546/291, 546/309, 548/131, 548/195, 549/435, 549/487, 549/58

ABSTRACT:

The present invention relates to a compound of the formula (I): ##STR1## wherein Ar.sup.1, Ar.sup.2, Ar.sup.3 and Ar.sup.4 represent an aryl group or a heteroaromatic ring group; A represents a hydrocarbon group which may be substituted; X and Y represent an oxygen atom, a sulfur atom, a carbonyl group or a group of the formula --CHR.sup.a -- (wherein R.sup.a is a hydrogen atom or a lower alkyl group) or --NR.sup.b -- (wherein R.sup.b is a hydrogen atom or a lower alkyl group), or X and Y together represent a vinylene group or an ethynylene group; R.sup.1, R.sup.2, R.sup.3, R.sup.8 and R.sup.9 represent a hydrogen atom, a halogen atom, a hydroxyl group, a lower alkyl group or a lower alkoxy group; R.sup.4 and R.sup.5 represent a hydrogen atom, a halogen atom, a hydroxyl group, an amino group, a nitro group, a cyano group, a carboxyl group, a lower alkoxycarbonyl group, a carbamoyl group, a lower alkylcarbamoyl

group, a lower alkyl group, a lower hydroxyalkyl group, a lower fluoroalkyl group or a lower alkoxy group; R.sup.6 is a lower alkyl group; and R.sup.7 is a hydrogen atom or a lower alkyl group, provided that when one of X and Y is an oxygen atom, a sulfur atom or a group of the formula --NR.sup.b --, the other is a carbonyl group or a group of the formula --CHR.sup.a --, its pharmaceutically acceptable salt or ester, and an antitumor agent containing it as an active ingredient.

8 Claims, 0 Drawing figures
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 40. Document ID: US 5776675 A

L5: Entry 40 of 61

File: USPT

Jul 7, 1998

US-PAT-NO: 5776675
DOCUMENT-IDENTIFIER: US 5776675 A

TITLE: Identification of compounds modulating protein/cell membrane association

DATE-ISSUED: July 7, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Broad, Peter Michael	Congleton			GB

US-CL-CURRENT: 435/6; 435/254.21, 435/320.1, 435/325, 530/350

ABSTRACT:

A method for identifying compounds which modulate protein/cell membrane association which method comprises contacting a test compound with a cell, having (i) a cell membrane, (ii) a heterologous protein comprising a reporter sequence and a recognition sequence for cell membrane association, (iii) a reporter system which is acted upon by the reporter sequence such that there is a measurable change in cell phenotype upon modulation of protein/cell membrane association by the test compound, and detecting any change in cell phenotype.

15 Claims, 9 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 4

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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L5: Entry 41 of 61

File: USPT

Nov 4, 1997

US-PAT-NO: 5684238

DOCUMENT-IDENTIFIER: US 5684238 A

TITLE: Biosynthesis of zeaxanthin and glycosylated zeaxanthin in genetically engineered hosts

DATE-ISSUED: November 4, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ausich; Rodney L.	Glen Ellyn	IL		
Brinkhaus; Friedhelm Luetke	Lisle	IL		
Mukharji; Indrani	Evanston	IL		
Proffitt; John H.	Oak Park	IL		
Yarger; James G.	St. Charles	IL		
Yen; Huei-Che Bill	Naperville	IL		

US-CL-CURRENT: [800/298](#); [435/189](#), [435/320.1](#), [435/67](#), [435/69.1](#), [536/23.2](#), [800/317.3](#)

ABSTRACT:

DNA segments encoding the *Erwinia herbicola* enzymes geranylgeranyl pyrophosphate (GGPP) synthase, phytoene synthase, phytoene dehydrogenase-4H, lycopene cyclase, beta-carotene hydroxylase, and zeaxanthin glycosylase, DNA variants and analogs thereof encoding an enzyme exhibiting substantially the same biological activity, vectors containing those DNA segments, host cells containing the vectors and methods for producing those enzymes, zeaxanthin and zeaxanthin diglucoside by recombinant DNA technology in transformed host organisms are disclosed.

57 Claims, 45 Drawing figures

Exemplary Claim Number: 4,9

Number of Drawing Sheets: 45

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 42. Document ID: US 5663193 A

L5: Entry 42 of 61

File: USPT

Sep 2, 1997

US-PAT-NO: 5663193

DOCUMENT-IDENTIFIER: US 5663193 A

TITLE: Inhibitors of farnesyl-protein transferase

DATE-ISSUED: September 2, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Cascales; Carmen	Madrid			ES
Lingham; Russell B.	Watchung	NJ		
Pelaez; Fernando	Madrid			ES
Polishook; Jon D.	Cranford	NJ		
Silverman; Keith C.	Somerset	NJ		
Singh; Sheo B.	Edison	NJ		
Zink; Deborah L.	Manalapan	NJ		

US-CL-CURRENT: 514/450; 435/254.1, 514/908, 549/349

ABSTRACT:

The present invention is directed to non-peptide compounds which inhibit farnesyl-protein transferase (FPTase) and the farnesylation of the oncogene protein Ras. The invention also relates to the process for the preparation of a compound of this invention by cultivating a culture of Phoma sp. The invention is further directed to chemotherapeutic compositions containing the compounds of this invention and methods for inhibiting farnesyl-protein transferase and the farnesylation of the oncogene protein Ras.

11 Claims, 0 Drawing figures
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 43. Document ID: US 5656472 A

L5: Entry 43 of 61

File: USPT

Aug 12, 1997

US-PAT-NO: 5656472
DOCUMENT-IDENTIFIER: US 5656472 A

TITLE: Beta-carotene biosynthesis in genetically engineered hosts

DATE-ISSUED: August 12, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ausich; Rodney L.	Glen Ellyn	IL		
Brinkhaus; Friedhelm Luetke	Lisle	IL		
Mukharji; Indrani	Evanston	IL		
Proffitt; John	Oak Park	IL		
Yarger; James	St. Charles	IL		
Yen; Huei-Che Bill	Naperville	IL		

US-CL-CURRENT: 435/193; 435/189, 435/252.2, 435/252.3, 435/252.33, 435/320.1, 435/67, 435/69.1, 435/847, 536/23.1, 536/23.2, 536/23.6

ABSTRACT:

DNA segments encoding the *Erwinia herbicola* enzymes geranylgeranyl pyrophosphate (GGPP) synthase, phytoene synthase, phytoene dehydrogenase-4H and lycopene cyclase, vectors containing those DNA segments, host cells containing the vectors and methods for producing those enzymes and beta-carotene by recombinant DNA technology in transformed host organisms are disclosed.

15 Claims, 33 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 33

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 44. Document ID: US 5643958 A

L5: Entry 44 of 61

File: USPT

Jul 1, 1997

US-PAT-NO: 5643958

DOCUMENT-IDENTIFIER: US 5643958 A

TITLE: Substituted amide derivatives

DATE-ISSUED: July 1, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Iwasawa; Yoshikazu	Tsukuba			JP
Aoyama; Tetsuya	Tsukuba			JP
Kawakami; Kumiko	Tsukuba			JP
Arai; Sachie	Tsukuba			JP
Satoh; Toshihiko	Tsukuba			JP
Monden; Yoshiaki	Tsukuba			JP

US-CL-CURRENT: 514/568; 514/379, 514/569, 548/217, 549/467, 549/77, 562/427, 562/444, 562/449, 562/450

ABSTRACT:

The present invention relates to a compound of the formula (I): ##STR1## wherein Ar.sup.1, Ar.sup.2 and Ar.sup.3 represent an aryl group or a heteroaromatic ring group; A represents a hydrocarbon group which may be substituted; Q represents a group of the formula --(CH.sub.2).sub.m -- (m is an integer of from 1 to 6) or --(CH.sub.2).sub.n --W--(CH.sub.2).sub.p -- (W is an oxygen atom, a sulfur atom, a vinylene group or an ethynylene group; n and p are a integer of from 0 to 3); R.sup.1 represents a hydrogen atom, a halogen atom, a hydroxyl group, a lower alkyl group, a lower alkoxy group, an aryl or heteroaromatic ring group which may be substituted; R.sup.2, R.sup.7 and R.sup.8 represent a hydrogen atom, a halogen atom, a hydroxyl group, a lower alkyl group or a lower alkoxy group; R.sup.3 and R.sup.4 represent a hydrogen atom, a halogen atom, a hydroxyl group, an amino group, a nitro group, a cyano group, a carboxyl group, a lower alkoxycarbonyl group, a carbamoyl group, a lower alkylcarbamoyl group, a lower alkyl group, a lower hydroxyalkyl group, a lower fluoroalkyl group or a lower alkoxy group; R.sup.5 represents a lower alkyl group; and R.sup.6 represents a hydrogen atom or a lower alkyl group, its pharmaceutically acceptable salt or ester, and an antitumor agent containing it as an active ingredient.

7 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 45. Document ID: US 5627057 A

L5: Entry 45 of 61

File: USPT

May 6, 1997

US-PAT-NO: 5627057

DOCUMENT-IDENTIFIER: US 5627057 A

TITLE: Inhibitor compounds of farnesyl-protein transferase and chemotherapeutic compositions containing the same, produced by strain ATCC 55532

DATE-ISSUED: May 6, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Singh; Sheo B.	Edison	NJ		
Garritty; George M.	Westfield	NJ		
Genillourd; Olga	Madrid			ES
Lingham; Russell B.	Watchung	NJ		
Martin; Isabel	Madrid			ES
Nallin-Omstead; Mary	E. Greenwich	RI		
Silverman; Keith C.	Somerset	NJ		
Zink; Deborah L.	Manalapan	NJ		

US-CL-CURRENT: 435/135; 435/136, 435/146, 435/147, 435/148, 435/169, 435/252.1, 435/252.6,
435/52, 435/822

ABSTRACT:

The present invention is directed to compounds which inhibit farnesyl-protein transferase (FPTase) and the farnesylation of the oncogene protein Ras. The invention is further directed to chemotherapeutic compositions containing the compounds of this invention and methods for inhibiting farnesyl-protein transferase and the farnesylation of the oncogene protein Ras. Furthermore, Actinoplanes sp. ATCC 55532 and Streptomyces sp. ATCC 55550 are microorganisms which are capable of producing the disclosed compounds which are classified as carboxylic acid esters. In addition a method for preparing the compounds is disclosed which includes cultivating strain ATCC 55532 or strain ATCC 55550. The strains are independently capable of producing the carboxylic acid ester compounds.

3 Claims, 0 Drawing figures
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 46. Document ID: US 5618988 A

L5: Entry 46 of 61

File: USPT

Apr 8, 1997

US-PAT-NO: 5618988
DOCUMENT-IDENTIFIER: US 5618988 A

TITLE: Enhanced carotenoid accumulation in storage organs of genetically engineered plants

DATE-ISSUED: April 8, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hauptmann; Randal	Woodland	CA		
Eschenfeldt; William H.	St. Charles	IL		
English; Jami	Aurora	IL		
Brinkhaus; Friedhelm L.	Lisle	IL		

US-CL-CURRENT: 800/282; 800/294, 800/298

ABSTRACT:

A transgenic higher plant, seed containing the transgene, and methods of providing enhanced carotenoid accumulation are disclosed. The transgenic higher plant has a genomic structural gene that encodes a chimeric polypeptide conjugate and over accumulates a colored native carotenoid in a preselected storage organ relative to the accumulation in a non-transgenic plant of the same type. Expression of the chimeric polypeptide is driven by a promoter operatively linked to that structural gene that provides storage organ-enhanced expression. The chimeric polypeptide has an N-terminal plastid transit peptide portion whose C-terminus is linked to the N-terminus of a non-higher plant phytoene synthase enzyme.

38 Claims, 13 Drawing figures
Exemplary Claim Number: 27

Number of Drawing Sheets: 13

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 47. Document ID: US 5545816 A

L5: Entry 47 of 61

File: USPT

Aug 13, 1996

US-PAT-NO: 5545816

DOCUMENT-IDENTIFIER: US 5545816 A

TITLE: Phytoene biosynthesis in genetically engineered hosts

DATE-ISSUED: August 13, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ausich; Rodney L.	Glen Ellyn	IL		
Brinkhaus; Friedhelm L.	Lisle	IL		
Mukharji; Indrani	Evanston	IL		
Proffitt; John	Oak Park	IL		
Yarger; James	St. Charles	IL		
Yen; Huei-Che B.	Naperville	IL		

US-CL-CURRENT: 800/298; 435/320.1, 536/23.2, 800/317.3

ABSTRACT:

DNA segments encoding the *Erwinia herbicola* enzymes geranylgeranyl pyrophosphate (GGPP) synthase and phytoene synthase, vectors containing those DNA segments, host cells containing the vectors and methods for producing those enzymes and phytoene by recombinant DNA technology in transformed host organisms are disclosed.

15 Claims, 21 Drawing figures

Exemplary Claim Number: 4,9

Number of Drawing Sheets: 21

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 48. Document ID: US 5530189 A

L5: Entry 48 of 61

File: USPT

Jun 25, 1996

US-PAT-NO: 5530189

DOCUMENT-IDENTIFIER: US 5530189 A

TITLE: Lycopene biosynthesis in genetically engineered hosts

DATE-ISSUED: June 25, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ausich; Rodney L.	Glen Ellyn	IL		
Brinkhaus; Friedhelm L.	Lisle	IL		
Mukharji; Indrani	Evanston	IL		
Proffitt; John	Oak Park	IL		
Yarger; James	St. Charles	IL		
Yen; Huei-Che B.	Naperville	IL		

US-CL-CURRENT: 800/298; 435/320.1, 536/23.2, 800/317.3

ABSTRACT:

DNA segments encoding the Erwinia enzymes geranylgeranyl pyrophosphate (GGPP) synthase, phytoene synthase and phytoene dehydrogenase-4H, vectors containing those DNA segments, host cells containing the vectors and methods for producing those enzymes and lycopene by recombinant DNA technology in transformed host organisms are disclosed.

6 Claims, 30 Drawing figures

Exemplary Claim Number: 1,4

Number of Drawing Sheets: 30

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw. Desc	Image
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☐ 49. Document ID: US 5530188 A

L5: Entry 49 of 61

File: USPT

Jun 25, 1996

US-PAT-NO: 5530188

DOCUMENT-IDENTIFIER: US 5530188 A

TITLE: Beta-carotene biosynthesis in genetically engineered hosts

DATE-ISSUED: June 25, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ausich; Rodney L.	Glen Ellyn	IL		
Brinkhaus; Friedhelm L.	Lisle	IL		
Mukharji; Indrani	Evanston	IL		
Proffitt; John	Oak Park	IL		
Yarger; James	St. Charles	IL		
Yen; Huei-Che B.	Naperville	IL		

US-CL-CURRENT: 800/282; 435/320.1, 536/23.2, 800/298, 800/317.3

ABSTRACT:

DNA segments encoding the Erwinia herbicola enzymes geranylgeranyl pyrophosphate (GGPP) synthase, phytoene synthase, phytoene dehydrogenase-4H and lycopene cyclase, vectors containing those DNA segments, host cells containing the vectors and methods for producing those enzymes and beta-carotene by recombinant DNA technology in transformed host organisms are disclosed.

7 Claims, 33 Drawing figures

Exemplary Claim Number: 4

Number of Drawing Sheets: 33

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw. Desc	Image
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☐ 50. Document ID: US 5510371 A

L5: Entry 50 of 61

File: USPT

Apr 23, 1996

US-PAT-NO: 5510371

DOCUMENT-IDENTIFIER: US 5510371 A

TITLE: Inhibitors of farnesyl-protein transferase

DATE-ISSUED: April 23, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Singh; Sheo B.	Edison	NJ		
Garrity; George M.	Westfield	NJ		
Genillourd; Olga	Madrid			ES
Lingham; Russell B.	Watchung	NJ		
Martin; Isabel	Madrid			ES
Omstead; Mary N.	E. Greenwich	RI		
Silverman; Keith C.	Somerset	NJ		
Zink; Deborah L.	Manalapan	NJ		

US-CL-CURRENT: 514/450; 514/547, 549/267, 560/180, 560/181, 560/55, 560/60

ABSTRACT:

The present invention is directed to compounds which inhibit farnesyl-protein transferase (FPTase) and the farnesylation of the oncogene protein Ras. The invention is further directed to chemotherapeutic compositions containing the compounds of this invention and methods for inhibiting farnesyl-protein transferase and the farnesylation of the oncogene protein Ras.

20 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 51. Document ID: US 5506262 A

L5: Entry 51 of 61

File: USPT

Apr 9, 1996

US-PAT-NO: 5506262

DOCUMENT-IDENTIFIER: US 5506262 A

TITLE: Cholesterol lowering compounds

DATE-ISSUED: April 9, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Burk; Robert M.	Laguna Beach	CA		
Parsons; William H.	Edison	NJ		
Acton, III; John J.	Cranford	NJ		
Berger; Gregory D.	Belle Mead	NJ		
Biftu; Tesfaye	Westfield	NJ		
Bugianesi; Robert L.	Colonia	NJ		
Chiang; Yuan-Ching P.	Scotch Plains	NJ		
Dufresne; Claude	East Brunswick	NJ		
Girotra; Narindar N.	Old Bridge	NJ		
Marquis, Jr.; Robert W.	Iselin	NJ		
Kuo; Chan-Hwa	South Plainfield	NJ		
Plevyak; Sandra P.	Edison	NJ		
Ponpipom; Mitree M.	Branchburg	NJ		
Whiting; Lori L.	West Carrollton	OH		
Bergstrom; James D.	Neshanic	NJ		
Santini; Conrad	Warren	NJ		

US-CL-CURRENT: 514/452; 514/321, 514/333, 514/338, 514/365, 514/382, 514/397, 514/406, 514/414, 514/422, 548/197, 548/253, 548/454, 548/455, 548/467, 548/468, 548/517, 548/518, 549/13, 549/28, 549/310, 549/363, 549/58, 549/60

ABSTRACT:

Disclosed herein are compounds of structural formula (I) ##STR1## which are useful as cholesterol lowering agents. These compounds are also useful as inhibitors of squalene synthetase, inhibitors of fungal growth, inhibitors of farnesyl-protein transferase and farnesylation of the oncogene protein Ras. These compounds are also useful in the treatment of cancer.

20 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 52. Document ID: US 5447717 A

L5: Entry 52 of 61

File: USPT

Sep 5, 1995

US-PAT-NO: 5447717

DOCUMENT-IDENTIFIER: US 5447717 A

TITLE: Cholesterol-lowering agents

DATE-ISSUED: September 5, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Biftu; Tesfaye	Westfield	NJ		

US-CL-CURRENT: 424/78.12; 424/78.16, 514/452, 549/263, 549/328

ABSTRACT:

This invention relates to compounds of structural formula (I): ##STR1## which are squalene synthase inhibitors and thus useful as cholesterol lowering agents and antifungal agents. These compounds are also inhibitors of farnesyl protein transferase and farnesylation of the oncogene protein Ras and thus useful in treating cancer.

7 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 53. Document ID: US 5436263 A

L5: Entry 53 of 61

File: USPT

Jul 25, 1995

US-PAT-NO: 5436263

DOCUMENT-IDENTIFIER: US 5436263 A

TITLE: Inhibitors of farnesyl-protein transferase

DATE-ISSUED: July 25, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Singh; Sheo B.	Edison	NJ		
Katz; Barry A.	Chapel Hill	NC		
Lingham; Russell B.	Watchung	NJ		
Martin; Isabel	Madrid			ES
Silverman; Keith C.	Somerset	NJ		

US-CL-CURRENT: 514/450; 435/254.1, 549/354

ABSTRACT:

The present invention is directed to compounds which inhibit farnesyl-protein transferase (FPTase) and the farnesylation of the oncogene protein Ras. The invention is further directed to chemotherapeutic compositions containing the compounds of this invention and methods for inhibiting farnesyl-protein transferase and the farnesylation of the oncogene protein Ras.

5 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC	Draw Desc	Image
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☐ 54. Document ID: US 5420334 A

L5: Entry 54 of 61

File: USPT

May 30, 1995

US-PAT-NO: 5420334

DOCUMENT-IDENTIFIER: US 5420334 A

TITLE: Inhibitors of farnesyl-protein transferase

DATE-ISSUED: May 30, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Singh; Sheo B.	Edison	NJ		
Bills; Gerald F.	Clark	NJ		
Lingham; Russell B.	Watchung	NJ		
Martin; Isabel	Madrid			ES
Silverman; Keith C.	Somerset	NJ		
Smith; Jack L.	Colonia	NJ		

US-CL-CURRENT: 560/138; 560/179, 560/183

ABSTRACT:

The present invention is directed to compounds which inhibit farnesyl-protein transferase (FPTase) and the farnesylation of the oncogene protein Ras. The invention is further directed to chemotherapeutic compositions containing the compounds of this invention and methods for inhibiting farnesyl-protein transferase and the farnesylation of the oncogene protein Ras.

20 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC	Draw Desc	Image
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☐ 55. Document ID: US 5420157 A

L5: Entry 55 of 61

File: USPT

May 30, 1995

US-PAT-NO: 5420157

DOCUMENT-IDENTIFIER: US 5420157 A

TITLE: Inhibitors of farnesyl protein transferase or prodrugs thereof

DATE-ISSUED: May 30, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Singh; Sheo B.	Edison	NJ		
Bills; Gerald F.	Roselle	NJ		
Lingham; Russell B.	Watchung	NJ		
Silverman; Keith C.	Somerset	NJ		
Zink; Deborah L.	Manalapan	NJ		

US-CL-CURRENT: 514/452; 549/261, 549/413, 549/477

ABSTRACT:

This invention relates to pharmaceutical compounds of structural formulae (I) and (II): ##STR1## and compositions and methods of treatment utilizing these compounds to inhibit farnesyl protein transferase and farnesylation of the oncogene protein Ras.

7 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 56. Document ID: US 5369125 A

L5: Entry 56 of 61

File: USPT

Nov 29, 1994

US-PAT-NO: 5369125

DOCUMENT-IDENTIFIER: US 5369125 A

TITLE: Cholesterol-lowering agents

DATE-ISSUED: November 29, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Berger; Gregory D.	Belle Mead	NJ		
Bergstrom; James D.	Neshanic	NJ		
Biftu; Tesfaye	Westfield	NJ		
Bugianesi; Robert L.	Colonia	NJ		
Burk; Robert M.	Laguna Beach	CA		
Girotra; Narindar N.	Old Bridge	NJ		
Kuo; C. H.	South Plainfield	NJ		
Parsons; William H.	Edison	NJ		
Ponpipom; Mitree M.	Branchburg	NJ		
Whiting; Lori L.	West Carrollton	OH		

US-CL-CURRENT: 514/452; 514/231.5, 514/397, 544/148, 548/311.7, 549/229, 549/305, 549/363

ABSTRACT:

This invention relates to compounds of structural formula (I): ##STR1## which are squalene synthase inhibitors and thus useful as cholesterol lowering agents and antifungal agents. These compounds are also inhibitors of farnesyl protein transferase and farnesylation of the oncogene protein Ras and thus useful in treating cancer.

15 Claims, 0 Drawing figures

Exemplary Claim Number: 1,2,10,12,13

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw. Desc	Image
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☐ 57. Document ID: US 5364948 A

L5: Entry 57 of 61

File: USPT

Nov 15, 1994

US-PAT-NO: 5364948

DOCUMENT-IDENTIFIER: US 5364948 A

TITLE: Biologically active compounds isolated from aerobic fermentation of *Trichoderma viride*

DATE-ISSUED: November 15, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Harris; Guy H.	Cranford	NJ		
Zink; Deborah	Manalapan	NJ		
Jones; E. Tracy T.	Solana Beach	CA		
Kong; Yu L.	Edison	NJ		

US-CL-CURRENT: 554/36, 548/469, 548/534, 554/213, 554/218, 554/227, 554/228, 554/229, 554/35, 554/61, 554/63

ABSTRACT:

This invention relates to compounds of structural formula (I) isolated from an aerobic fermentation of *Trichoderma viride* MF5628, ATCC 74084: ##STR1## which are squalene synthase inhibitors and thus useful as cholesterol lowering agents. These compounds are also potent antifungal agents. Additionally, they inhibit farnesyl protein transferase and farnesylation of the oncogene protein Ras and are thus useful in treating cancer. This invention also relates to a process for obtaining compounds of structural formula (I).

11 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw. Desc	Image
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☐ 58. Document ID: US 5283256 A

L5: Entry 58 of 61

File: USPT

Feb 1, 1994

US-PAT-NO: 5283256

DOCUMENT-IDENTIFIER: US 5283256 A

TITLE: Cholesterol-lowering agents

DATE-ISSUED: February 1, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dufresne; Claude	East Brunswick	NJ		
Guarro; Josep	Tarragona			ES
Huang; Leeyuan	Watchung	NJ		
Kong; Yu L.	Edison	NJ		
Lingham; Russell B.	Watchung	NJ		
Meinz; Maria S.	Somerset	NJ		
Silverman; Keith C.	Somerset	NJ		
Singh; Sheo B.	Edison	NJ		

US-CL-CURRENT: 514/452; 435/254.1, 549/363

ABSTRACT:

This invention relates to compounds of structural formula (I): ##STR1## which are squalene synthase inhibitors and thus useful as cholesterol lowering agents and antifungal agents. These compounds are also inhibitors of farnesyl protein transferase and farnesylation of the oncogene protein Ras and thus useful in treating cancer. This invention also relates to a process for obtaining compounds of structural formula (I).

18 Claims, 0 Drawing figures
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 59. Document ID: US 5270332 A

L5: Entry 59 of 61

File: USPT

Dec 14, 1993

US-PAT-NO: 5270332
DOCUMENT-IDENTIFIER: US 5270332 A

TITLE: Cholesterol lowering agents

DATE-ISSUED: December 14, 1993

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chen; Shieh-Shung T.	Morganville	NJ		
Huang; Leeyuan	Watchung	NJ		
MacConnell; John G.	Westfield	NJ		
Polishook; Jon D.	Scotch Plains	NJ		
White; Raymond F.	Englishtown	NJ		

US-CL-CURRENT: 514/452; 549/363

ABSTRACT:

This invention relates to compounds of structural formula (I): ##STR1## which are squalene synthase inhibitors and thus useful as cholesterol lowering agents. The compounds also exhibit antifungal activity and are inhibitors of farnesyl-protein transferase.

7 Claims, 0 Drawing figures
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 60. Document ID: US 5260465 A

L5: Entry 60 of 61

File: USPT

Nov 9, 1993

US-PAT-NO: 5260465

DOCUMENT-IDENTIFIER: US 5260465 A

TITLE: Inhibitors of farnesyl protein transferase

DATE-ISSUED: November 9, 1993

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Singh; Sheo B.	Edison	NJ		
Zink; Deborah L.	Manalapan	NJ		

US-CL-CURRENT: 554/134; 554/8, 560/176, 562/512.4, 562/523, 562/590, 562/598

ABSTRACT:

This invention relates to pharmaceutical compounds of structural formula (I): ##STR1## and compositions and methods of treatment utilizing these compounds to inhibit farnesyl protein transferase and farnesylation of the oncogene protein Ras.

4 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC	Draw Desc	Image
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L4 and (plant or seed)

61

Display Format:

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Search Results - Record(s) 61 through 61 of 61 returned.

☐ 61. Document ID: US 5258401 A

L5: Entry 61 of 61

File: USPT

Nov 2, 1993

US-PAT-NO: 5258401

DOCUMENT-IDENTIFIER: US 5258401 A

TITLE: Cholesterol lowering compounds

DATE-ISSUED: November 2, 1993

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Berger; Gregory D.	Belle Mead	NJ		
Marquis, Jr.; Robert W.	Iselin	NJ		
Robichaud; Albert J.	Stirling	NJ		
Scolnick; Edward M.	Wynnewood	PA		

US-CL-CURRENT: 514/452; 514/228.2, 514/233.8, 514/255.05, 514/256, 514/321, 514/333, 514/338, 514/365, 514/374, 514/382, 514/397, 514/406, 514/414, 514/422, 546/187, 546/197, 546/256, 546/268.4, 546/269.7, 546/270.7, 546/271.4, 546/272.7, 546/274.4, 546/274.7, 546/275.1, 546/275.4, 546/276.1, 546/276.4, 546/277.4, 546/277.7, 546/278.1, 546/278.4, 546/278.7, 546/280.1, 546/280.4, 546/281.1, 546/282.4, 548/204, 548/236, 548/253, 548/311.7, 548/364.4, 548/454, 548/455, 548/517, 548/518, 549/13, 549/229, 549/23, 549/28, 549/310, 549/363, 549/58, 549/60

ABSTRACT:

Disclosed herein are compounds of structural formula (I) ##STR1## which are useful as cholesterol lowering agents. These compounds are also useful as inhibitors of squalene synthase, inhibitors of fungal growth, inhibitors of farnesyl-protein transferase and farnesylation of the oncogene protein Ras. These compounds are also useful in the treatment of cancer.

10 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw	Desc	Image
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L4 and (plant or seed)

61

Display Format:

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STN SEARCH

09/786,675

12/2/02

=> file .nash

=> s farnesyl (2w) transferase and (corn or maize or zea mays)

L1 4 FILE MEDLINE
L2 6 FILE CAPLUS
L3 3 FILE SCISEARCH
L4 0 FILE LIFESCI
L5 3 FILE BIOSIS
L6 4 FILE EMBASE

TOTAL FOR ALL FILES

L7 20 FARNESYL (2W) TRANSFERASE AND (CORN OR MAIZE OR ZEA MAYS)

=> s l7 not 2000-2002/py

TOTAL FOR ALL FILES

L14 18 L7 NOT 2000-2002/PY

=> dup rem l14

PROCESSING COMPLETED FOR L14

L15 6 DUP REM L14 (12 DUPLICATES REMOVED)

=> d ibib abs

L15 ANSWER 1 OF 6 MEDLINE DUPLICATE 1
ACCESSION NUMBER: 1999265363 MEDLINE
DOCUMENT NUMBER: 99265363 PubMed ID: 10334194
TITLE: Carcinogen and dietary lipid regulate ras expression and localization in rat colon without affecting farnesylation kinetics.
AUTHOR: Davidson L A; Lupton J R; Jiang Y H; Chapkin R S
CORPORATE SOURCE: Faculty of Nutrition, Molecular and Cell Biology Group, Texas A&M University, College Station 77843-2471, USA.
CONTRACT NUMBER: CA59034 (NCI)
CA61750 (NCI)
SOURCE: CARCINOGENESIS, (1999 May) 20 (5) 785-91.
Journal code: 8008055. ISSN: 0143-3334.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199905
ENTRY DATE: Entered STN: 19990614
Last Updated on STN: 20000303
Entered Medline: 19990528

AB Epidemiological and experimental data suggest that dietary fiber and fat are major determinants of colorectal cancer. However, the mechanisms by which these dietary constituents alter the incidence of colon cancer have not been elucidated. Evidence indicates that dominant gain-of-function mutations short-circuit protooncogenes and contribute to the pathogenesis of cancer. Therefore, we began to dissect the mechanisms whereby dietary fat and fiber, fed during the initiation, promotion and progression stages of colon tumorigenesis, regulate ras p21 localization, expression and mutation frequency. Male Sprague-Dawley rats (140) were provided with **corn** oil or fish oil and pectin or cellulose plus or minus the carcinogen azoxymethane (AOM) in a 2 x 2 x 2 factorial design and killed after 34 weeks. We have previously shown adenocarcinoma incidence in these animals to be 70.3% (52/74) for **corn** oil + AOM and 56.1% (37/66) for fish oil + AOM (P < 0.05). Total ras expression as well as ras membrane:cytosol ratio was 4- to 6-fold higher in colon tumors than in mucosa from AOM- or saline-injected rats. Expression of ras in the mucosal membrane fraction was 13% higher for animals fed **corn** oil compared with fish oil feeding (P < 0.05), which is noteworthy since ras must be localized at the plasma membrane to function. The elevated ras membrane:cytosol ratio in tumors was not due to increased **farnesyl** protein **transferase** activity or prenylation state, as nearly all detectable ras was in the prenylated form. Phosphorylated p42 and p44 mitogen activated protein kinase (ERK) expression was two-fold higher in tumor extracts compared with uninvolved mucosa from AOM- and saline-injected rats (P < 0.05). The frequency of K-ras mutations was not significantly different between the various groups, but there was a trend toward a greater incidence of mutations in tumors from **corn** oil

fed rats (85%) compared with fish oil fed rats (58%). Our results indicate that the carcinogen-induced changes in ras expression and membrane localization are associated with the in vivo activation of the ERK pathway. In addition, suppression of tumor development by dietary n-3 polyunsaturated fatty acids may be partly due to a combined effect on colonic ras expression, membrane localization, and mutation frequency.

=> d ibib abs 2-

YOU HAVE REQUESTED DATA FROM 5 ANSWERS - CONTINUE? Y/(N):y

L15 ANSWER 2 OF 6 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 1998330309 MEDLINE
DOCUMENT NUMBER: 98330309 PubMed ID: 9667735
TITLE: Dietary fish oil inhibits the expression of
farnesyl protein **transferase** and colon
tumor development in rodents.
AUTHOR: Singh J; Hamid R; Reddy B S
CORPORATE SOURCE: Division of Nutritional Carcinogenesis, American Health
Foundation, Valhalla, NY 10595, USA.
CONTRACT NUMBER: CA-17613 (NCI)
CA-37663 (NCI)
SOURCE: CARCINOGENESIS, (1998 Jun) 19 (6) 985-9.
Journal code: 8008055. ISSN: 0143-3334.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199807
ENTRY DATE: Entered STN: 19980811
Last Updated on STN: 19980811
Entered Medline: 19980730

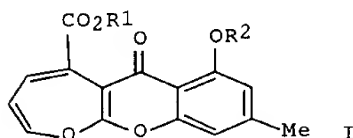
AB Although epidemiological and experimental studies indicate a strong relationship between different dietary fats and risk of colon cancer, the modulating effects of these nutritional factors at the molecular level are not fully elucidated. Activated ras genes have been implicated in the etiology of many human malignancies, including colon cancer. It is well established that the transforming ability of ras-p21 depends on its correct localization in plasma membrane. We have previously demonstrated that ingestion of a relatively higher amount of dietary fish oil leads to reduced plasma membrane levels of ras-p21 with concomitant increase in its cytoplasmic contents during the promotion and progression phases of chemically-induced colon tumorigenesis. In this follow-up experiment, we have found that intake of a high amount of **corn** oil, one of the most widely used fats in the American diet, enhances the expression of **farnesyl** protein **transferase** (FPTase). This enzyme catalyses farnesylation of ras precursors in a critical step during post-translational modification of ras oncoproteins, thereby enabling their anchorage to plasma membrane. In contrast, consumption of high amounts of fish oil, which is rich in omega-3 polyunsaturated fatty acids, reduces the levels of FPTase expression, thus inhibiting post-translational processing of ras precursors resulting in decreased ras function both in colonic mucosa as well as in colon tumors. These results correlate with increased incidence and multiplicity of grossly visibly colon tumors in carcinogen-treated animals fed a high **corn** oil diet versus decreased incidence and multiplicity of colon tumors in their counterparts fed the high fish oil diet. This dietary inhibition of FPTase may have a practical chemopreventive potential.

L15 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:597472 CAPLUS
DOCUMENT NUMBER: 127:261785
TITLE: Preparation of 6-oxooxepino[2,3-b][1]benzopyran-5-
carboxylates as inhibitors of **farnesyl**
-protein **transferase**
INVENTOR(S): Cascales, Carmen; Lingham, Russell B.; Pelaez,
Fernando; Polishook, Jon D.; Silverman, Keith C.;
Singh, Sheo B.; Zink, Deborah L.
PATENT ASSIGNEE(S): Merck and Co., Inc., USA
SOURCE: U.S., 9 pp.
CODEN: USXXAM

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	-----
US 5663193	A	19970902	US 1996-682248	19960717

OTHER SOURCE(S): MARPAT 127:261785
GI



AB Title compds. [I; R₁ = H, alkyl; R₂ = H, alkyl, COR₃; R₃ = alkyl], were prepd. as inhibitors of Ras protein farnesylation (no data). Thus, fermn. of MF6118 (Phoma) in a medium prepd. from **corn** steep liquor, tomato paste, oat flour, glucose, and trace elements gave Me 7-hydroxy-9-methyl-6-oxo-6H-oxepino[2,3-b][1]benzopyran-5-carboxylate.

L15 ANSWER 4 OF 6 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.

ACCESSION NUMBER: 97275265 EMBASE

DOCUMENT NUMBER: 1997275265

TITLE: ent-Kaurene synthase from the fungus Phaeosphaeria sp. L487: cDNA isolation, characterization, and bacterial expression of a bifunctional diterpene cyclase in fungal gibberellin biosynthesis.

AUTHOR: Kawaide H.; Imai R.; Sassa T.; Kamiya Y.

CORPORATE SOURCE: H. Kawaide, Lab. for Plant Hormone Function, Frontier Research Program, Inst. of Physical/Chemical Res., Wako, Saitama 351-01, Japan. hkawaide@postman.riken.go.jp

SOURCE: Journal of Biological Chemistry, (1997) 272/35 (21706-21712).

Refs: 40

ISSN: 0021-9258 CODEN: JBCHA3

COUNTRY: United States

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 004 Microbiology

LANGUAGE: English

SUMMARY LANGUAGE: English

AB ent-Kaurene is the first cyclic diterpene intermediate of gibberellin biosynthesis in both plants and fungi. In plants, ent-kaurene is synthesized from geranylgeranyl diphosphate via copalyl diphosphate in a two-step cyclization catalyzed by copalyl diphosphate synthase and ent-kaurene synthase. A cell-free system of the fungus *Phaeosphaeria* sp. L487 converted labeled geranylgeranyl diphosphate to ent-kaurene. A cDNA fragment, which possibly encodes copalyl diphosphate synthase, was isolated by reverse transcription-polymerase chain reaction using degenerate primers based on the consensus motifs of plant enzymes. Translation of a full-length cDNA sequence isolated from the fungal cDNA library revealed an open reading frame for a 106-kDa polypeptide. The deduced amino acid sequence shared 24 and 21% identity with **maize** copalyl diphosphate synthase and pumpkin ent-kaurene synthase, respectively. A fusion protein produced by expression of the cDNA in *Escherichia coli* catalyzed the two-step cyclization of geranylgeranyl diphosphate to ent-kaurene. Amo-1618 completely inhibited the copalyl diphosphate synthase activity of the enzyme at 10⁻⁶ M, whereas it did not inhibit the ent-kaurene synthase activity even at 10⁻⁴ M. These results indicate that the fungus has a bifunctional diterpene cyclase that can convert geranylgeranyl diphosphate into ent-kaurene. They may be separate catalytic sites for the two cyclization reactions.

L15 ANSWER 5 OF 6

MEDLINE

DUPLICATE 3

ACCESSION NUMBER: 97153274 MEDLINE

DOCUMENT NUMBER: 97153274 PubMed ID: 9000564

TITLE: Dietary fat and colon cancer: modulating effect of types and amount of dietary fat on ras-p21 function during promotion and progression stages of colon cancer.

AUTHOR: Singh J; Hamid R; Reddy B S

CORPORATE SOURCE: Division of Nutritional Carcinogenesis, American Health Foundation, Valhalla, New York 10595, USA.

CONTRACT NUMBER: CA-17613 (NCI)

CA-37663 (NCI)

SOURCE: CANCER RESEARCH, (1997 Jan 15) 57 (2) 253-8.

Journal code: 2984705R. ISSN: 0008-5472.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 199702

ENTRY DATE: Entered STN: 19970227

Last Updated on STN: 20000303

Entered Medline: 19970211

AB Although epidemiological and experimental studies have indicated a strong relationship between types and amount of dietary fat and colon tumorigenesis, the modulating effects of these nutritional factors at the molecular level have not been fully elucidated. Transforming proteins encoded by activated ras genes have been implicated in the etiology of many human malignancies, including colon cancer. It is now well established that the transforming ability of ras-p21 critically depends on its correct localization in plasma membrane. The posttranslational processing of the cytosolic precursor (pro-ras), as it is synthesized in the cytoplasm, and its proper anchorage to the cytoplasmic face of plasma membrane are determined by an important intermediate metabolite of dietary fat and an enzyme system that includes **farnesyl** protein **transferase**. To provide an understanding of the molecular basis of the relationship between the types and amount of dietary fat and the transforming function of ras, especially during the stages of promotion and progression of colon tumor development, we investigated the effect of various types and amount of dietary fat on the expression of ras-p21 during azoxymethane (AOM)-induced colon carcinogenesis. Male F344 rats were fed the semipurified American Institute of Nutrition-76A diet containing low-fat **corn** oil and were given s.c. injections of AOM dissolved in normal saline at a dose rate of 15 mg/kg body weight, once weekly, for 2 weeks. Control animals received s.c. injections of equal volumes of normal saline. Beginning 1 day after the second AOM or saline injection, groups of animals intended for the treatment with different types of high-fat dietary regimens were fed the semipurified American Institute of Nutrition-76A diets containing high levels of high-fat **corn** oil (HFCO) rich in omega-6 fatty acids or high levels of high-fat fish oil (HFFO) rich in omega-3 fatty acids; the remaining animals in experimental and control groups were continued on the low-fat **corn** oil diet until termination of the experiment. Groups of animals were sacrificed 1, 12, or 36 weeks after the last AOM or saline injection, and their colonic mucosa and grossly visible colon tumors from rats sacrificed 36 weeks after the last AOM injection were analyzed for the levels of expression of ras-p21. We found that AOM induced increasingly higher levels of ras-p21 expression with advancing stages of colon tumor development. The HFCO diet resulted in enhanced expression of AOM-induced ras-p21 as observed 36 weeks after the last AOM injection. In contrast, feeding the HFFO diet inhibited AOM-induced ras-p21 expression. These results correlate with increased incidence and multiplicity of grossly visible colon tumors in AOM-treated animals fed a HFCO diet versus decreased incidence and lower multiplicity of colon tumors in their counterparts on the HFFO diet. Further analysis of ras-p21 levels in cytosol and plasma membrane revealed that feeding a HFFO diet resulted in increasing accumulation of ras-p21 in cytoplasm with a concomitant decrease in membrane-bound ras-p21 levels as observed in animals sacrificed 12 and 36 weeks after the last AOM injection. Thus, the dietary HFCO may promote colon tumorigenesis by increasing ras-p21 expression, whereas HFFO appears to exert its antitumor activity by interfering with posttranslational modification and membrane localization of ras-p21.

L15 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1996:113461 CAPLUS
 DOCUMENT NUMBER: 124:156052
 TITLE: Anticancer compositions containing
 3-hydroxy-3-methylglutaryl coenzyme A reductase
 inhibitor and protein **farnesyl**
transferase inhibitor with enhanced activity
 INVENTOR(S): Kawada, Sumio; Matsuzawa, Juji
 PATENT ASSIGNEE(S): Sankyo Co, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07316076	A2	19951205	JP 1994-109355	19940524

OTHER SOURCE(S): MARPAT 124:156052
 AB Anticancer compns. contg. 3-hydroxy-3-methylglutaryl CoA reductase
 inhibitor (e.g. Na pravastin) and protein **farnesyl**
transferase inhibitor (e.g. d-limonene) showed enhanced activity
 as detd. in e.g. HepG2 cancer cell cultures. Capsules were formulated
 contg. pravastin 10, limonene 100, lactose 100, **corn** starch
 148.8 and sodium stearate 1.2 mg.

=> file reg
 => s farnesyltransferase/cn
 L17 2 FARNESYLTRANSFERASE/CN

=> d 1-2

L17 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2002 ACS
 RN 131384-38-8 REGISTRY
 CN Farnesyltransferase, protein (cysteine) (9CI) (CA INDEX NAME)
 OTHER NAMES:
 CN CAAX farnesyltransferase
 CN Farnesyl protein transferase
 CN **Farnesyltransferase**
 CN Farnesyltransferase, farnesyl pyrophosphate-protein
 CN Farnesyltransferase, protein
 CN Prenyltransferase
 CN Protein cysteine farnesyltransferase
 CN Protein farnesyltransferase
 CN Protein prenyltransferase
 CN Ras farnesyltransferase
 DR 132421-44-4, 56626-17-6, 133876-90-1
 MF Unspecified
 CI MAN
 SR CA
 LC STN Files: ADISNEWS, AGRICOLA, BIOBUSINESS, BIOSIS, CA, CAPLUS,
 CASREACT, CEN, CHEMCATS, CIN, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE
 1326 REFERENCES IN FILE CA (1962 TO DATE)
 14 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 1334 REFERENCES IN FILE CAPLUS (1962 TO DATE)

L17 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2002 ACS
 RN 9032-58-0 REGISTRY
 CN Synthetase, geranylgeranyl pyrophosphate (9CI) (CA INDEX NAME)
 OTHER NAMES:
 CN All-trans-geranylgeranyl pyrophosphate synthetase
 CN E.C. 2.5.1.29
 CN **Farnesyltransferase**
 CN Farnesyltranstransferase
 CN Geranylgeraniol pyrophosphate synthase
 CN Geranylgeranyl diphosphate synthase

CN Geranylgeranyl pyrophosphate synthase
CN Geranylgeranyl pyrophosphate synthetase
CN Trans-Geranylgeranyl diphosphate synthase
MF Unspecified
CI MAN
LC STN Files: ADISNEWS, AGRICOLA, BIOBUSINESS, BIOSIS, CA, CAPLUS, CEN,
CIN, PROMT, TOXCENTER, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE
225 REFERENCES IN FILE CA (1962 TO DATE)
3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
228 REFERENCES IN FILE CAPLUS (1962 TO DATE)

=> file .nash

=> s prenyl (2W) transferase
TOTAL FOR ALL FILES
L24 614 PRENYL (2W) TRANSFERASE

=> s prenyltransferase

TOTAL FOR ALL FILES
L31 1674 PRENYLTRANSFERASE

=> s 124 or 131

TOTAL FOR ALL FILES
L38 2201 L24 OR L31

=> s 138 and (corn or maize or zea mays)

TOTAL FOR ALL FILES
L45 7 L38 AND (CORN OR MAIZE OR ZEA MAYS)

=> s 17 not 2000-2002/py

TOTAL FOR ALL FILES
L52 18 L7 NOT 2000-2002/PY

=> s 145 not 2000-2002/py

TOTAL FOR ALL FILES
L59 1 L45 NOT 2000-2002/PY

=> d ibib abs

L59 ANSWER 1 OF 1 SCISEARCH COPYRIGHT 2002 ISI (R)
ACCESSION NUMBER: 96:472222 SCISEARCH
THE GENUINE ARTICLE: UR518
TITLE: IDENTIFICATION OF A **MAIZE** ENDOSPERM-SPECIFIC
CDNA-ENCODING FARNESYL PYROPHOSPHATE SYNTHETASE
AUTHOR: LI C P; LARKINS B A (Reprint)
CORPORATE SOURCE: UNIV ARIZONA, DEPT PLANT SCI, FORBES HALL, TUCSON, AZ,
85721 (Reprint); UNIV ARIZONA, DEPT PLANT SCI, TUCSON, AZ,
85721
COUNTRY OF AUTHOR: USA
SOURCE: GENE, (01 JUN 1996) Vol. 171, No. 2, pp. 193-196.
ISSN: 0378-1119.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: 21
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Farnesyl pyrophosphate synthetase (FPS; EC 2.5.1.10) produces the
15-carbon farnesyl pyrophosphate which is utilized in the synthesis of
sterols, carotenoids, dolichols, coenzyme Q, heme a and farnesylated
proteins. We have cloned this mRNA sequence from a **maize**
endosperm cDNA library and determined the 1378-nucleotide (nt) sequence of

the DNA fragment. This sequence specifies an open reading frame of 1050 nt encoding FPS. The deduced amino acid sequence shows a high degree of similarity to FPS from a wide range of organisms. Southern blot analysis indicated that there are at least two FPS gene copies in the **maize** genome. The cloned FPS is expressed preferentially in **maize** endosperm and is up-regulated in the endosperm mutants, o2 and fl2.

=> log y

```
=> s (geranylgeran? ?phosphate synthetase) or (geranylgeran? ?phosphate synthase)
L1          96 FILE MEDLINE
L2          213 FILE CAPLUS
L3          155 FILE SCISEARCH
LEFT TRUNCATION IGNORED FOR '?PHOSPHATE' FOR FILE 'LIFESCI'
LEFT TRUNCATION IGNORED FOR '?PHOSPHATE' FOR FILE 'LIFESCI'
L4           2 FILE LIFESCI
L5          146 FILE BIOSIS
L6           78 FILE EMBASE
```

TOTAL FOR ALL FILES

```
L7          690 (GERANYLGERAN? ?PHOSPHATE SYNTHETASE) OR (GERANYLGERAN? ?PHOSPHA
TE SYNTHASE)
```

Left truncation is not valid in the specified search field in the specified file. The term has been searched without left truncation. Examples: '?TERPEN?' would be searched as 'TERPEN?' and '?FLAVONOID' would be searched as 'FLAVONOID.'

If you are searching in a field that uses implied proximity, and you used a truncation symbol after a punctuation mark, the system may interpret the truncation symbol as being at the beginning of a term. Implied proximity is used in search fields indexed as single words, for example, the Basic Index.

```
=> s l7 and (corn or maize or zea mays)
```

TOTAL FOR ALL FILES

```
L14          9 L7 AND (CORN OR MAIZE OR ZEA MAYS)
```

```
=> s l14 not 2000-2002/py
```

TOTAL FOR ALL FILES

```
L21          6 L14 NOT 2000-2002/PY
```

```
=> dup rem l21
```

PROCESSING COMPLETED FOR L21

```
L22          4 DUP REM L21 (2 DUPLICATES REMOVED)
```

```
=> d ibib abs 1-4
```

```
L22 ANSWER 1 OF 4  CAPLUS  COPYRIGHT 2002 ACS          DUPLICATE 1
ACCESSION NUMBER:    1997:530832  CAPLUS
DOCUMENT NUMBER:     127:232058
TITLE:               The viviparous 12 maize mutant is deficient
                    in abscisic acid, carotenoids, and chlorophyll
                    synthesis
AUTHOR(S):           Maluf, Mirian P.; Saab, Imad N.; Wurtzel, Eleanore T.;
                    Sachs, Martin M.
CORPORATE SOURCE:    Department of Crop Sciences, University of Illinois,
                    Urbana, IL, 61801, USA
SOURCE:              Journal of Experimental Botany (1997), 48(311),
                    1259-1268
                    CODEN: JEBOA6; ISSN: 0022-0957
PUBLISHER:           Oxford University Press
DOCUMENT TYPE:       Journal
LANGUAGE:            English
```

AB The carotenoid/viviparous **maize** (**Zea mays**

L.) mutant vp12 is a single locus mutation that results in lemon-colored endosperms, viviparous embryos and albino seedlings. This work presents the first mol. and biochem. anal. of vp12. Levels of ABA were measured during embryo development and also in isolated organs under water deficit stress. ABA levels were lower in developing embryos of mutants than in non-mutant siblings at all stages analyzed. In addn., under water deficit, mutant organs accumulated less ABA than corresponding non-mutant sibling organs. Furthermore, immature mutant embryos accumulated transcripts for several ABA or water deficit-responsive genes, Em, glb1, glb2, rab17, and vpl. These results indicated that vp12 is deficient in ABA accumulation, but not in the ABA signal transduction pathway. Anal. of carotenoid exts. showed that mutant endosperms accumulated lower amts. of colored precursors than non-mutant endosperms. The expression of key enzymes in the carotenoid biosynthesis pathway was also analyzed in vp12 endosperms. Western anal. indicated that phytoene synthase (PSY) was

present at equal levels in normal and mutant endosperms. In addn., phytoene desaturase (PDS) transcript levels were similar in non-mutant and mutant tissues. Transcripts for **geranylgeranyl pyrophosphate synthase** (GGPPS), on the other hand, accumulated at lower levels in mutant endosperms than in non-mutant ones. However, Southern anal. of genomic DNA from normal and mutant tissues indicated that the gene encoding GGPPS is unlikely to be directly affected in vp12. Finally, vp12 seedlings grown under dim-light conditions produced white leaves, showing that vp12 is deficient in chlorophyll as well as carotenoid synthesis.

L22 ANSWER 2 OF 4 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 ACCESSION NUMBER: 1994:415269 BIOSIS
 DOCUMENT NUMBER: PREV199497428269
 TITLE: Molecular biology of carotenoid biosynthesis in plants.
 AUTHOR(S): Bartley, Glenn E. (1); Scolnik, Pablo A. (1); Giuliano, Giovanni
 CORPORATE SOURCE: (1) DuPont Central Res., PO Box 80402, Wilmington, DE 19880-0402 USA
 SOURCE: Jones, R. L. [Editor]; Somerville, C. R. [Editor]. Annual Review of Plant Physiology and Plant Molecular Biology, (1994) Vol. 45, pp. 287-301. Annual Review of Plant Physiology and Plant Molecular Biology. Publisher: Annual Reviews Inc. P.O. Box 10139, 4139 El Camino Way, Palo Alto, California 94306, USA. ISSN: 1040-2519. ISBN: 0-8243-0645-7.
 DOCUMENT TYPE: Book; General Review
 LANGUAGE: English

L22 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1994:478020 CAPLUS
 DOCUMENT NUMBER: 121:78020
 TITLE: Light-stimulated carotenoid biosynthesis during transformation of **maize** etioplasts is regulated by increased activity of isopentenyl pyrophosphate isomerase
 AUTHOR(S): Albrecht, Manuela; Sandmann, Gerhard
 CORPORATE SOURCE: Lehrstuhl Phys. Biochem. Pflanzen, Univ. Konstanz, Konstanz, D-78434, Germany
 SOURCE: Plant Physiology (1994), 105(2), 535-43
 CODEN: PLPHAY; ISSN: 0032-0889
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB Light-stimulated carotenoid biosynthesis assocd. with the transformation of etioplasts to chloroplasts was investigated after dark-grown **maize (Zea mays)** seedlings were transferred into light. These studies focused on the enzymes of the pathway to detect those enzyme activities that were stimulated in the light and thus that were responsible for increased biosynthesis of carotenoids. In preliminary expts., norflurazon, an inhibitor of phytoene desaturase, was used to prevent phytoene being further metabolized to carotenoids. Light-dependent stimulation of phytoene accumulation indicated that the light-regulated steps are located in the pathway leading to phytoene synthesis. The use of the 14C-labeled precursors mevalonic acid, isopentenyl pyrophosphate, and farnesyl pyrophosphate pointed to increased activity of an enzyme involved in the biosynthetic steps between isopentenyl pyrophosphate and farnesyl pyrophosphate. Detn. of the activities of all five enzymes of the pathway involved in the sequence from mevalonic acid to phytoene revealed that the only enzyme activity stimulated by light was isopentenyl pyrophosphate isomerase. Over a 3-h period of illumination, this enzyme activity, like carotenoid biosynthesis, was stimulated 2.8-fold.

L22 ANSWER 4 OF 4 SCISEARCH COPYRIGHT 2002 ISI (R)
 ACCESSION NUMBER: 94:425088 SCISEARCH
 THE GENUINE ARTICLE: NU959
 TITLE: MOLECULAR-BIOLOGY OF CAROTENOID BIOSYNTHESIS PLANTS
 AUTHOR: BARTLEY G E (Reprint); SCOLNIK P A; GIULIANO G
 CORPORATE SOURCE: DUPONT CO INC, CENT RES, POB 80402, WILMINGTON, DE, 19880 (Reprint); CASACCIA RES CTR, I-00100 ROME, ITALY
 COUNTRY OF AUTHOR: USA; ITALY

SOURCE: ANNUAL REVIEW OF PLANT PHYSIOLOGY AND PLANT MOLECULAR
BIOLOGY, (1994) Vol. 45, pp. 287-301.
ISSN: 0066-4294.
DOCUMENT TYPE: General Review; Journal
FILE SEGMENT: LIFE; AGRI
LANGUAGE: ENGLISH
REFERENCE COUNT: 72

=> log y